

Frequently Asked Questions (FAQs) for MMA

General Questions

- How do I get access or input my projects on MMA?
- How do I log on to MMA?
- How long is each session after I logged on?
- Can I save changes for my projects?
- How do I know if someone shared a model or project to me as view only or as a collaborator?
- What modifications can I made on the MMA as View Only?
- How do I copy a project from a project that was shared to me?
- How do I share my project with a colleague?

Navigation Bar

- What are the tabs on the Navigation Bar?

Key Functions on Left Column

Project Information

- What is Project Keys?
- What is private vs. public?

Construct

- How do I select an enzyme to display all possible cutting sites on the schematic diagram?
- How do I remove the selected enzyme(s) from displaying on the schematic diagram?
- How do I design a probe for Southern blot?
- How do I design a Neo probe for Southern blot?
- How do I modify my probe after I have designed it?
- How do I delete my probe after I have entered it?
- How do I change the way my probe displayed on the schematic diagram?
- How do I display a Southern strategy of a specified probe and enzyme on the schematic diagram?
- How do I display a Southern strategy with two probes and enzymes on the schematic diagram?
- How do I remove the selected Southern enzyme from displaying on the schematic diagram?

- How do I modify the title on the schematic diagram?
- How do I modify the description on the schematic diagram?
- How do I retrieve repeat mask for my sequences?

Construct Strategies

- How do I display the schematic diagram after FLP recombinase has been introduced?
- How do I display the schematic diagram after Cre recombinase has been introduced?

Reporting

- How do I view possible Southern strategies including enzymes and expected sizes for a specific probe?
- What is the difference between Project Report and Client Report?
- What is the difference between WT and TV on Project Report and Client Report?

Screening & QA

- What is on the Design Oligo page?
- How do I display oligos on the schematic diagram?
- How do I display oligos on the Client Report?
- How do I find the expected size for PCR amplification for an oligo or primer pair?
- How do I design my own PCR oligo or primer?

Results & Blog

- How do I upload a file (i.e. photo, document, publication, etc.) for my project?
- How do I add or view comments to my uploaded files?
- How do I blog about a specific project?

Key Functions on Top Panel

- How do I get to the Ensembl website?
- How do I display the targeting vector on the schematic diagram?
- What is displayed on the schematic diagram?
- How do I hide the schematic diagram?
- How do I display my selected oligos on the schematic diagram?

Schematic Options

- How do I change the font style and size for the title on the schematic diagram?
- How do I change the font style and size for the title on the schematic diagram?
- What are the small dashed lines drawn on the schematic diagram?

- How do I remove the repeats from RepeatMasker displaying on the schematic diagram?
- How do I hide my probe(s) on the schematic diagram?
- How do I display the relative distance or size on the schematic diagram?
- What is the static or interactive button on the schematic diagram?
- Can I save the schematic diagram?
- Can I download the schematic diagram?
- How do I zoom in to see details of the schematic diagram?

General Questions

- **How do I get access or input my projects on MMA?**

There are two ways of accessing projects on the Mouse Model Archive:

1. You can register and choose your own username and password.
2. We can assign you a username and password.

- **How do I log on to MMA?**

You would need a username and password to log on to MMA. Without a username or password, only published projects will be accessible.



- **How long is each session after I logged on?**

Each session is 20 minutes of continuous keystroke activity. If your computer is idle, a prompt will be flashed up on your screen when the last 5 minutes is to be expired. By hitting any key, it will renew you for another 20 minutes. After 20 minutes of continuous inactivity, you will be automatically logged off.

- **Can I save changes for my projects?**

If someone shared the project to you as View Only, you will be able to make any changes but once you are logged off, the changes will not be saved. However, if you copy the project to your own private list, you will be able to save all your changes. If someone shared the project to you as collaboration, you can make and save any changes including the targeting vector sequences and design. If you input your own project, you will be able to make and save any changes.

- **How do I know if someone shared a model or project to me as view only or as a collaborator?**

You will find a list of mouse models and projects shared to you when click on **Mouse models shared to you** tab. You will see an icon next to the project. View only () is that you could view the project but cannot save any changes. Collaborator () allows you to make and save any changes including the targeting vector sequences and design.

MOUSE MODEL ARCHIVE Logout

Home Mouse Models Contact F.A.Q.

Designer Published mouse models Private mouse models Mouse models shared to you Approval pending shared models (0)

Search MMA Mouse Models

List all models Basic search Advanced search

Shared Project List

Project ID	Project Name	Project #	Project Type	TV Type	Strain	Project Manager	Designer	Client	Gene	Input By	Gene Info.			
759	ABCD	1000A	Cre-Lox Conditional 2a	Plasmid	B6	ITL	ITL	Researcher	Sgms1	itlprod	link		Share	Select

Copyright © MouseGPS.com All rights reserved.

- **What modifications can I made on the MMA as View Only?**

If the project is shared to you as **View Only**, you have the option to make changes but your changes will not be saved after you logged off.

Below are some modifications that you could make on the MMA:

- * Design your own probes and display Southern strategy with selected enzyme(s)
- * Display all possible cutting sites for selected enzyme(s)
- * Visualize different mating schemes (FLP/Cre) on schematic diagram
- * Select oligos display on schematic diagram but can't design new oligos
- * Generate reports for project/client WT or TV
- * Generate repeat mask reports but can't show repeat regions on schematic diagram
- * Change schematic title and description
- * Change flanking region outside 5' and 3' arms
- * Replace a different sequence for selection cassette or any vector components
- * And many more options

- **How do I copy a project from a project that was shared to me?**

After you logged on, select the **Mouse models shared to you** tab and a list of projects shared to you will be displayed. Select the project that you would like to make a copy.

[Main Menu](#)

Proj. Keys	Org.	Dest.
Project Name	Humanized P53-R248Q	Humanized P53-R248Q
Project Number	RD007	RD007
Project Type	Humanized Mouse KI 9	Humanized Mouse KI 9
TV Type	Plasmid	* Plasmid BAC
Strain	B6/129 Hybrid	B6/129 Hybrid
Project Manager	iTL	iTL
Construct Designer	iTL	iTL
Customer Name	Researcher	Researcher
Category	Shared	Private
Gene Name	trp53	trp53
Gene Information	http://www.ensembl.org/Mus_musculus/Gene/Summary?g=ENSMUSG00000059552;t=11:69580359-69591873	

- How do I share my project with a colleague?

There are two options that you can share your project to your colleague:

- 1) You can use select **Share** in your **Private Project List**

MOUSE MODEL ARCHIVE [iITL](#) [Logout](#)

[Home](#)
[Mouse Models](#)
[Contact](#)
[F.A.Q](#)

[Designer](#)
[Published mouse models](#)
[Private mouse models](#)
[Mouse models shared to you](#)
[Approval pending shared models \(0\)](#)

Search MMA Mouse Models

[List all models](#)
[Basic search](#)
[Advanced search](#)

Private Project List

Project ID	Project Name	Project #	Project Type	TV Type	Strain	Project Manager	Designer	Client	Gene	Input By	Gene Info.			
760	EGFH	1000B	Conventional	Plasmid	B6/129 Hybrid	iTL	iTL	Researcher	Sgms1	iTlprod	link		Share	Select
759	ABCD	1000A	Cre-Lox Conditional 2a	Plasmid	B6	iTL	iTL	Researcher	Sgms1	iTlprod	link		Share	Select
756	Humanized P53-R248Q	RD007	Humanized Mouse KI 9	Plasmid	B6/129 Hybrid	iTL	iTL	Researcher	trp53	iTlprod	link		Share	Select
755	Humanized P53-G245S	RD007	Humanized Mouse KI 9	Plasmid	B6/129 Hybrid	iTL	iTL	Researcher	trp53	iTlprod	link		Share	Select

or

- 2) **Share** button on top of the schematic diagram.

MOUSE MODEL ARCHIVE Home Mouse Models Contact F.A.Q

Naming New Project Copy to a New Project Published mouse models Private mouse models Mouse models shared to you Approval pending shared models (0)

Project Information

Project keys

Load/update WT sequence

Retrieve WT repeat mask

Load/update cDNA library

Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added

Retrieve TV repeat mask

Construct Strategy

☒ Original

☐ Neo Deletion by FLP

☐ Cre-Lox Recombination

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Humanized P53-R248Q RD007 (Gene> trp53)

Draw Diagram
Show Oligos*
Hide Diagram
Save Diagram
Download Diagram
Print Diagram
Draw

* Please refresh oligo selections on the oligo design page first

Title font: Times New Roman

Title font size: 14 pt

Description font: Times New Roman

Description font size: 8 pt

[Set Format>>](#)

Schematic Options

☐ Show repeats ☒ Show probes ☐ Show grids ☒ Static ☐ Interactive [Zoomed View](#)

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

After clicking on one of the **Share** buttons, MMA Sharing page will be displayed. You can select Sharing Type either as View only or Collaboration. If you shared your project as **View only**, your colleague can not save any changes. If you shared your project as **Collaboration**, your colleague can make and save all changes including the targeting vector design.

Then enter your colleague's registered username and add any comments in the box below. Click **Share** button to share your project to your colleague.

MMA SHARING

Close

Share Project 756: Humanized P53-R248Q RD007

Select Sharing Type

☒ View only ☐ Collaboration

Select User to Share

Please indicate the user you would like to share to:

itinput2

Comments

Share

Close

Your Private Project List will display that the project has been shared.

MOUSE MODEL ARCHIVE itprod Logout

[Home](#) [Mouse Models](#) [Contact](#) [F.A.Q](#)

[Designer](#) [Published mouse models](#) [Private mouse models](#) [Mouse models shared to you](#) [Approval pending shared models \(0\)](#)

Search MMA Mouse Models

[List all models](#) [Basic search](#) [Advanced search](#)

Private Project List

Project ID	Project Name	Project #	Project Type	TV Type	Strain	Project Manager	Designer	Client	Gene	Input By	Gene Info.			
760	EGFH	1000B	Conventional	Plasmid	B6/129 Hybrid	ITL	ITL	Researcher	Sgms1	itlprod	link		Share	Select
759	ABCD	1000A	Cre-Lox Conditional 2a	Plasmid	B6	ITL	ITL	Researcher	Sgms1	itlprod	link		Share	Select
756	Humanized P53-R248Q	RD007	Humanized Mouse K1 9	Plasmid	B6/129 Hybrid	ITL	ITL	Researcher	trp53	itlprod	link		Share	Select
755	Humanized P53-G245S	RD007	Humanized Mouse K1 9	Plasmid	B6/129 Hybrid	ITL	ITL	Researcher	trp53	itlprod	link		Share	Select

Also, if you go under **Approval pending shared model** tab on the Navigation bar as circled in red, it will display all projects and usernames that you have shared the project(s) to.

Navigation Bar

What are the tabs on the Navigation bar?

Below is a description of each tab on the Navigation bar.



Designer – new project can be input through here.

Published mouse models – a list of public projects that is available and accessible to registered and non-registered users. Changes cannot be made for these projects.

Private mouse models – a list of private projects input by you as a registered user.

Mouse models shared to you – a list of projects that shared to you by another registered user. You will have the privilege of view only or collaboration.

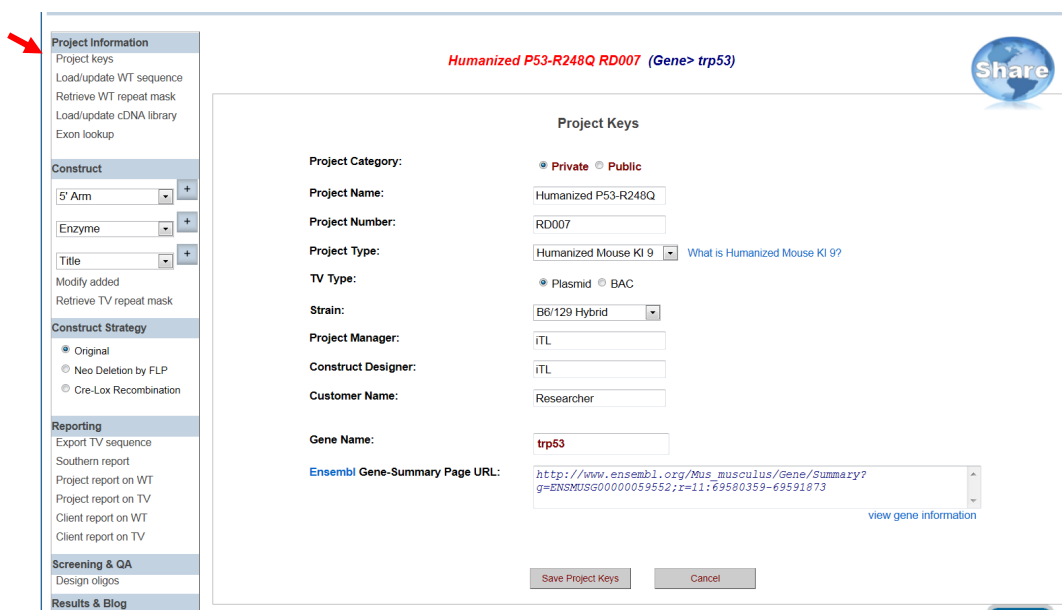
Approval pending shared models – a list of projects that you have shared with other registered user(s). Also a list of projects that is pending for your approval to be shared from one user to another user for your shared project.

Key Functions on Left Column

Project Information

- **What is Project Keys?**

In the Project Information section on the left-hand column, click **Project Keys**. The Project Keys provide pertinent information relating to your project. Project Information page contains project category (private/public), project name, project number, project type (a list of detailed project types available), targeting vector (TV) type (plasmid/BAC), ES strain used, project manager, construct designer, customer name, gene name, and link for ensemble gene summary page.



The screenshot shows the 'Project Information' sidebar on the left with a red arrow pointing to the 'Project Keys' link. The main content area is titled 'Humanized P53-R248Q RD007 (Gene> trp53)' and features a 'Share' button. The 'Project Keys' form contains the following fields:

- Project Category:** Radio buttons for ☒ Private and ☐ Public.
- Project Name:** Text input field containing 'Humanized P53-R248Q'.
- Project Number:** Text input field containing 'RD007'.
- Project Type:** Dropdown menu showing 'Humanized Mouse KI 9' with a link 'What is Humanized Mouse KI 9?'.
- TV Type:** Radio buttons for ☒ Plasmid and ☐ BAC.
- Strain:** Dropdown menu showing 'B6/129 Hybrid'.
- Project Manager:** Text input field containing 'iTL'.
- Construct Designer:** Text input field containing 'iTL'.
- Customer Name:** Text input field containing 'Researcher'.
- Gene Name:** Text input field containing 'trp53'.
- Ensembl Gene-Summary Page URL:** Text area containing the URL 'http://www.ensembl.org/Mus_musculus/Gene/Summary?g=ENSMUSG00000059552;r=11:69580359-69591673' and a 'view gene information' link.

At the bottom of the form are 'Save Project Keys' and 'Cancel' buttons.

- **What is private vs. public?**

If you select private on the Project Keys page, your project will be viewed by you when using your username and password unless you share your project with another registered user. If you select public, your project can be viewed by anyone with or without a registered username.

Construct

- How do I select an enzyme to display all possible cutting sites on the schematic diagram?

In the Construct section on the left-hand column, select Enzyme and click the **[+]** button. It will take you to the Select Cutting Enzymes page. The Enzyme library has 63 unique enzymes to choose from. Select the enzyme of your choice by checking off the box next to your enzyme. Then click **Select** button. Your selected enzyme will be listed on the right side of the screen. You can select multiple enzymes by checking off the boxes and then click **Select**. If you want to clear all of your selected enzymes, click **Deselect All** button or remove the check from the box next to the enzyme.

The screenshot shows the 'Construct' section of a software interface. On the left sidebar, the 'Construct' section is expanded, and a red arrow points to the 'Enzyme' dropdown menu. The main area is titled 'Select Cutting Enzymes' and displays a grid of 63 enzymes with checkboxes. The 'BamHI' enzyme is selected. A 'Selected Cutting Enzymes' box on the right shows 'BamHI (GGATCC)'. At the bottom, there are buttons for 'Draw Diagram', 'Show Oligos', 'Hide Diagram', 'Save Diagram', 'Download Diagram', 'Print Diagram', and a large 'Draw' button.

Click **Draw** or **Draw Diagram** and all possible cutting sites for your selected enzyme will be displayed on the schematic diagram. Below is an example of all possible cutting sites for the selected enzyme Bam HI.

Load/update cDNA library
Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added
Retrieve TV repeat mask

Construct Strategy

☒ Original
☐ Neo Deletion by FLP
☐ Cre-Lox Recombination

Reporting

Export TV sequence
Southern report
Project report on WT
Project report on TV
Client report on WT
Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping
Blog

Draw Diagram Show Oligos* Hide Diagram Save Diagram Download Diagram Print Diagram **Draw**

* Please refresh oligo selections on the oligo design page first

Title font: Times New Roman Title font size: 14 pt Description font: Times New Roman Description font size: 8 pt [Set Format >>](#)

Schematic Options ☒ Show repeats ☒ Show probes ☐ Show grids * Static ☐ Interactive [Zoomed View](#)

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

Legend: 1 KB, 100 bp, P53, 5' Arm, Point Mutation, 3' Arm

<Length in bp> 5' Arm: 7870 Human P: 2052 Point Mutation: 1 Human P: 1867 Neo: 1791 3' Arm: 2235 targeted region: 3708

In this strategy, mouse trp53 exons 4-9 were replaced by human trp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

- **How do I remove the selected enzyme(s) from displaying on the schematic diagram?**

In the Construct section on the left-hand column, select Enzyme from the drop-down menu and click the **[+]** button. It will take you to the Select Cutting Enzymes page. Click **Deselect All** button to clear all selected enzymes or remove the check from the box next to the enzyme to deselect a specific enzyme. Enzymes will not be displayed on the schematic diagram when you click **Draw** or **Draw Diagram**.

Project Information
Project keys
Load/update WT sequence
Retrieve WT repeat mask
Load/update cDNA library
Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added
Retrieve TV repeat mask

Construct Strategy

☒ Original
☐ Neo Deletion by FLP
☐ Cre-Lox Recombination

Reporting

Export TV sequence
Southern report
Project report on WT
Project report on TV
Client report on WT
Client report on TV

Screening & QA

Design oligos

Humanized P53-R248Q RD007 (Gene> trp53)

Share

Select Cutting Enzymes

Enzyme Library

<input type="checkbox"/> Aat II	<input type="checkbox"/> Acc65 I	<input type="checkbox"/> Afl II	<input type="checkbox"/> Age I
<input type="checkbox"/> Apa I	<input type="checkbox"/> ApaL I	<input type="checkbox"/> ApaL II	<input type="checkbox"/> Asc I
<input type="checkbox"/> Ase I	<input type="checkbox"/> Avr II	<input checked="" type="checkbox"/> BamH I	<input type="checkbox"/> Bcl I
<input type="checkbox"/> Bgl I	<input type="checkbox"/> Bgl II	<input type="checkbox"/> BsiW I	<input type="checkbox"/> BspD I
<input type="checkbox"/> BspE I	<input type="checkbox"/> BspH I	<input type="checkbox"/> BsrG I	<input type="checkbox"/> BssH II
<input type="checkbox"/> BstBI	<input type="checkbox"/> Cla I	<input type="checkbox"/> Dra I	<input type="checkbox"/> Eap I
<input type="checkbox"/> EcoR I	<input type="checkbox"/> EcoR V	<input type="checkbox"/> Fse I	<input type="checkbox"/> Fsp I
<input type="checkbox"/> Hind III	<input type="checkbox"/> Hpa I	<input type="checkbox"/> Kpn I	<input type="checkbox"/> Mfe I
<input type="checkbox"/> Mlu I	<input type="checkbox"/> Msc I	<input type="checkbox"/> Nae I	<input type="checkbox"/> Nar I
<input type="checkbox"/> Nco I	<input type="checkbox"/> Nde I	<input type="checkbox"/> NgoM IV	<input type="checkbox"/> Nhe I
<input type="checkbox"/> Not I	<input type="checkbox"/> Nru I	<input type="checkbox"/> Nsi I	<input type="checkbox"/> Pac I
<input type="checkbox"/> Pst I	<input type="checkbox"/> PspOMI	<input type="checkbox"/> Pst I	<input type="checkbox"/> Pvu I
<input type="checkbox"/> Pvu II	<input type="checkbox"/> Sac I	<input type="checkbox"/> Sac II	<input type="checkbox"/> Sal I
<input type="checkbox"/> Sca I	<input type="checkbox"/> Sfo I	<input type="checkbox"/> Sma I	<input type="checkbox"/> Spe I
<input type="checkbox"/> Sph I	<input type="checkbox"/> Ssp I	<input type="checkbox"/> Stu I	<input type="checkbox"/> Swa I
<input type="checkbox"/> Xba I	<input type="checkbox"/> Xho I	<input type="checkbox"/> Xma I	

Select...
Deselect All
Add to list
Delete from list

Selected Cutting Enzymes
BamH I (GGATCC)

Draw Diagram Show Oligos* Hide Diagram Save Diagram Download Diagram Print Diagram **Draw**

- **How do I design a probe for Southern blot?**

In the Construct section on the left-hand column, select Probe from the drop-down menu and click the **[+]** button. It will take you to the Define Probes page.

Enter your Probe Name. Enter the start and end sequences (5'→3') of your probe (a minimum of 10 bases) per entry. To enter the sequences, you have the option to type in the sequences using your keyboard or select the nucleotide boxes on the left panel. The box << is for backspace or deletion. Then press **Get Sequence** button. The entire sequence of your probe will be displayed in the Probe Sequence box. If any base was incorrectly entered, sequences will not be displayed in the Probe Sequence box and an error message will be prompted.

You also have the option to paste the entire probe sequence directly into the Probe Sequence box.

Click **Save Probe** button to add your designed probe. A message for Confirm Probe Type will be prompted. It will indicate if the probe that you created is located 5' or 3' and external or internal. Click **Confirm & Save** button to save your probe.

Retrieve WT repeat mask
Load/update cDNA library
Exon lookup

Construct

5' Arm +
Probe +
Title +

Modify added
Retrieve TV repeat mask

Construct Strategy

☒ Original
☐ Neo Deletion by FLP
☐ Cre-Lox Recombination

Reporting

Export TV sequence
Southern report
Project report on WT
Project report on TV
Client report on WT
Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping
Blog

Define Probes

Probe 3

Probe Name: PB3/4

Get Probe Sequence (optional):
Get probe sequence from TV sequence by specifying the starting and ending sequences

Probe sequence starts with: TTGCCCATCGTACTTACCACTTGCA

Probe sequence ends with: GTAATTCTTAAAGCGCCTATCCTCC

Get Sequence

Probe sequence: TTGCCCATCGTACTTACCACTTGCAACCTTTCAAGAAGTTCCTGGAGCGGTGCTGAACCTCGGACGAGGAACCACTGAGGTATCGGGGTACCTGCAGAGCAAAATGGAATAAAACTGGAAAGGAGATGGAGAACAGCAAACTGGGTCCTCAGAGCAAAATGGAATAAAACTGGTCTGAGGACCGGTGGCTGTCTCTCAGAGTCCAGGCTCCTCAGATTCCAGTGTCACTTACGTGTGTCCTCATCCTCAGAGCGGTTCCTCAGAGCAAACTTCCTGTTGCTTCTCCTGACTCCAACTCGGGGAGATTGTTTCTTCTCCGGAAGACTCGCATGTTCA
1056 bp BLAST this sequence

Direction: 5'-3'

Display level: Normal

Save Probe Cancel

Confirm Probe Type
This probe is found to be a 5' arm ext. probe. Do you want to confirm and save the probe?

Confirm & Save Don't Save

- **How do I design a Neo probe for Southern blot?**

In the Construct section on the left-hand column, select Probe from the drop-down menu and click the **[+]** button. It will take you to the Define Probes page. Enter your Probe Name. Enter the start and end sequences for your Neo probe and press **Get Sequence** button or paste entire Neo probe sequence into the Probe Sequence box. A prompt will ask you to select the strategy for outside 5' or 3' arm or Long Arm (LA) or Short Arm (SA). A Southern report will be provided based on which arm you selected.

Click **Save Probe** button to add your Neo probe. A message will be prompted that it recognizes the probe as a Neo probe. Press **Confirm & Save** to save your probe.

Project keys
Load/update WT sequence
Retrieve WT repeat mask
Load/update cDNA library
Exon lookup

Construct
5' Arm
Probe
Title
Modify added
Retrieve TV repeat mask

Construct Strategy
Original
Neo Deletion by FLP
Cre-Lox Recombination

Reporting
Export TV sequence
Southern report
Project report on WT
Project report on TV
Client report on WT
Client report on TV

Screening & QA
Design oligos

Results & Blog
Results & Phenotyping
Blog

Humanized P53-R248Q RD007 (Gene> trp53)

Share

Define Probes

Probe 3

Probe Name:

Get Probe Sequence (optional):
Get probe sequence from TV sequence by specifying the starting and ending sequences
Probe sequence starts with: A T C G <<
Probe sequence ends with: A T C G <<

Probe sequence:
ATGGTACTTTCTCGGCAGGAGCAAGGTGAGATGACAGGAGATCCTGCCCGGCACCTT
CGCCCAATAGCAGCCAGTCCCTTCCCGCTTCACTGACAAAGTCGAGCAGAGCTGGCGA
AGGAAACGCCGTGCTGGCCAGCCACGATAGCCGCGCTGCTGCTGGAGTTCAATTC
AGGGACCGGACAGGTCGGTCTTGACAAAAGAACCGGCGCCCTGCGCTGACAGCC
GGAAACGGCGGACATCAGAGCAGCCGATTGCTGTTGTGCGCAGTCATAGCCGAATAG
CCTCTCCACCCAAAGCGGCCGAGAACCTGCGTGCAATCCATCTTGT
336 bp [BLAST this sequence](#)

For this Selection-Cassette probe, please specify the desired Southern enzyme cutting pattern:
☒ Outside 3' Arm ☐ Outside 5' Arm

Direction: 5'-3'
Display level: Normal

Confirm Probe Type
This probe is found to be a Neo probe. Do you want to confirm and save the probe?

- **How do I modify my probe after I have designed it?**

In the Construct section on the left-hand column, click **Modify Added**. It will take you to the View & Defined Probes section. Highlight the probe name that you'd like to modify then click **Modify Highlighted Probe** button. It will take you to the Define Probes page. After making changes, click **Save Probe** to update your new probe and **Confirm & Save**.

The screenshot shows a software interface for managing genetic constructs. On the left is a sidebar with a menu. A red arrow points to the 'Modify added' button in the 'Construct Strategy' section. The main area is divided into two sections: 'View & Manage Defined Exons' and 'View & Manage Defined Probes'.

Construct Strategy Menu:

- Title
- Modify added
- Retrieve TV repeat mask
- Construct Strategy**
 - Original
 - Neo Deletion by FLP
 - Cre-Lox Recombination
- Reporting**
 - Export TV sequence
 - Southern report
 - Project report on WT
 - Project report on TV
 - Client report on WT
 - Client report on TV
- Screening & QA**
 - Design oligos
- Results & Blog**
 - Results & Phenotyping
 - Blog

View & Manage Defined Exons:

Defined Exons

Buttons: Modify Highlighted Exon, Delete Highlighted Exon

Exons list:

- 1: m1
- 2: m2
- 3: m3
- 4: ENSMUSE00000111821
- 5: ENSMUSE00000111826
- 6: ENSMUSE00000111825
- 7: ENSMUSE000001134622
- 8: ENSMUSE00000111823
- 9: ENSMUSE00000111830
- 10: m10
- 11: m11
- 12: h4
- 13: h56
- 14: h7
- 15: h89
- 16: h7 (R248Q)

*: The detected Exon is not AG/GT spliced. The designer needs to confirm.

View & Manage Defined Probes:

Defined Probes

Buttons: Modify Highlighted Probe, Delete Highlighted Probe

Probes list:

- 1: PB3/4
- 2: PB5/6
- 3: Neo

- **How do I delete my probe after I have entered it?**

In the Construct section on the left-hand column, click **Modify Added**. It will take you to the View & Manage Defined Probes section. Click the probe name that you'd like to delete then click **Delete Highlighted Probe** button. A prompt will ask you to confirm. If you click **OK**, your probe will be deleted.

View & Manage Defined Exons

Defined Exons

1: m1 2: m2 3: m3
 4: ENSMUSE00000111821 5: ENSMUSE00000111825 6: ENSMUSE00000111825
 7: ENSMUSE00001134622 8: ENSMUSE00001134623 9: ENSMUSE00000111830
 10: m10 11: m11 12: h4
 13: h56 14: h7 15: h89
 16: h7 (R248Q)

*: The detected Exon is not AG/GT spliced. The designer needs to confirm.

★ View & Manage Defined Probes

Defined Probes

1: PB3/4 2: PB5/6 3: Neo

- **How do I change the way my probe displayed on the schematic diagram?**

In the Construct section on the left-hand column, click **Modify Added**. It will take you to the View & Manage Defined Probes section. Click the probe name that you'd like to modify then click **Modify Highlighted Probe** button.

View & Manage Defined Exons

Defined Exons

1: m1 2: m2 3: m3
 4: ENSMUSE00000111821 5: ENSMUSE00000111826 6: ENSMUSE00000111825
 7: ENSMUSE00001134622 8: ENSMUSE00000111823 9: ENSMUSE00000111830
 10: m10 11: m11 12: h4
 13: h56 14: h7 15: h89
 16: h7 (R248Q)

*: The detected Exon is not AG/GT spliced. The designer needs to confirm.

★ View & Manage Defined Probes

Defined Probes

1: PB3/4 2: PB5/6 3: Neo

It will take you to the Define Probes page. Click on the drop-down menu for the Display Level and select how your probe will be displayed on the schematic diagram. Then click **Save Probe** to update your change.

Define Probes

Probe: 3

Probe Name: Neo

Get Probe Sequence (optional):
Get probe sequence from TV sequence by specifying the starting and ending sequences

Probe sequence starts with: A T C G <<

Probe sequence ends with: A T C G <<

Probe sequence:

```

ATGGATACCTTCTCGGCAGGAGCAAGGTGAGATGACAGGAGATCCTGCCCGGCACCTT
CGCCCAATAGCAGCCAGTCCTTCCCGCTTCAGTGACAAAGTCGAGCACAGCTGCGCA
AGGAACGCCCGTCTGTGGCCAGCCACGATAGCCGCGCTGCCCTGCTCGAGTTCATTTC
AGGGCACCGGACAGGTCGGTCTTGACAAAAGAACCGGGCGCCCTGCGCTGACAGCC
GGAACACGGCGGATCAGAGCAGCCGATTGCTGTGTGTGCCAGTCATAGCCGAATAG
CCTCTCCACCAACGGCCGGAGAACCTGCGTGCAATCCATCTTGT
  
```

336 bp [BLAST this sequence](#)

Direction: 5'-3'

★ Display level: Normal
Low
Lowest

View & Manage Defined Probes

Defined Probes

- **How do I display a Southern strategy of a specified probe and enzyme on the schematic diagram?**

In the Construct section on the left-hand column, select **Southern Enzyme** from the drop-down menu and click the **[+]** button. It will take you to the Select Enzymes for Southern Blot page. All probes that you have designed and added are displayed. Select your probe of choice. A list of applicable enzymes for your specified probe is displayed below. Click your enzyme of choice and press the **Select** button. Your selected enzyme is displayed on the right side.

Project Information

Project keys

Load/update WT sequence

Retrieve WT repeat mask

Load/update cDNA library

Exon lookup

Construct

5' Arm

Southern Enzyme

Title

Modify added

Retrieve TV repeat mask

Construct Strategy

Original

Neo Deletion by FLP

Cre-Lox Recombination

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Client report on WT

Client report on TV

Screening & QA

Design oligos

Humanized P53-R248Q RD007 (Gene> trp53)

Share

Select Enzymes for Southern Blot

Select >>

Reset

Draw Selected

Draw Saved

Select a probe

PB3/4

PB5/6

Applicable southern enzymes

ApaI

BclI

BglII

BspHI

SpeI

SphI

XbaI

Southern enzymes selected:

PB3/4 - XbaI

Save as Best Enz.

Best enzymes saved:

Draw Diagram

Show Oligos*

Hide Diagram

Save Diagram

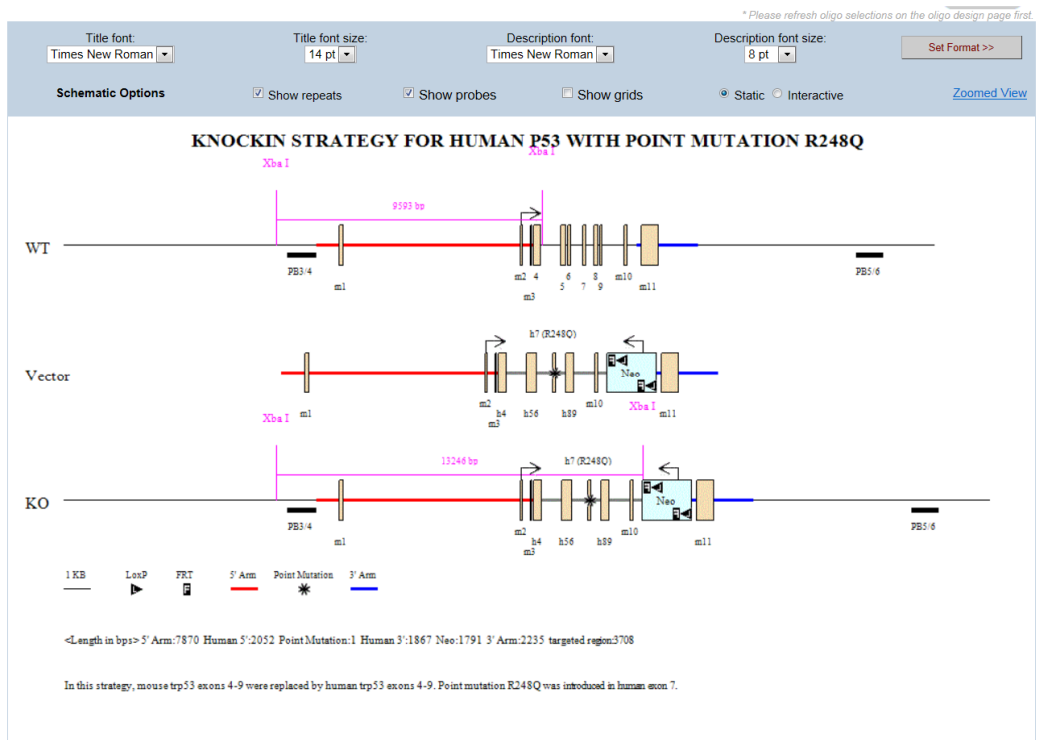
Download Diagram

Print Diagram

Draw

* Please refresh oligo selections on the oligo design page first.

Click **Draw** or **Draw Diagram**. A schematic diagram is displayed with the specified probe, the selected enzyme, and the expected sizes for the WT and KO bands.



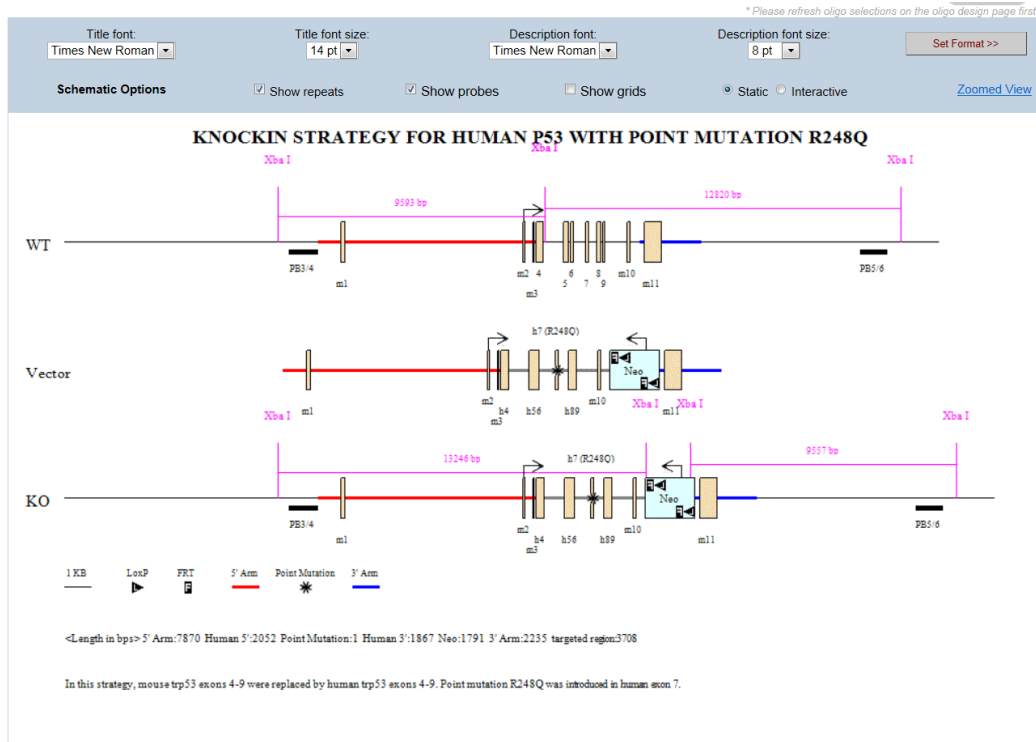
- **How do I display a Southern strategy with two probes and enzymes on the schematic diagram?**

In the Construct section on the left-hand column, select Southern Enzyme from the drop-down menu and click the **[+]** button. It will take you to the Select Enzymes for Southern Blot page. All probes that you have designed and added are displayed. Select your probe of choice. A list of applicable enzymes for your specified probe is displayed below. Click your enzyme of choice and press the **Select** button. Your selected enzyme is displayed on the right side.

Select another probe and a list of enzymes is displayed below. Click your enzyme of choice and press the **Select** button. Your selected enzyme is displayed on the right side with the probe name.

The screenshot shows a web interface for selecting enzymes for a Southern blot. On the left, a sidebar contains a 'Construct' section with a dropdown menu set to 'Southern Enzyme' and a '+' button. The main content area is titled 'Select Enzymes for Southern Blot' and features a 'Humanized P53-R248Q RD007 (Gene> trp53)' header. Below this, there's a 'Select a probe' dropdown menu with 'PB3/4' and 'PB5/6' options; 'PB5/6' is selected. Underneath, a grid of 'Applicable southern enzymes' is shown, including Bgl I, BspE I, BstH II, BstBI, Eag I, Hpa I, Mlu I, Nar I, Sac II, Sfo I, Sma I, Spe I, Xba I, Xho I, and Xma I. 'Xba I' is selected. To the right, a section titled 'Southern enzymes selected:' lists 'PB3/4 - Xba I' and 'PB5/6 - Xba I'. At the bottom of the main area, there are buttons for 'Draw Diagram', 'Show Oligos*', 'Hide Diagram', 'Save Diagram', 'Download Diagram', and 'Print Diagram'. A large blue 'Draw' button is located at the bottom right. A small note at the bottom right of the main area reads: '* Please refresh oligo selections on the oligo design page first.'

Click **Draw** or **Draw Diagram**. A schematic diagram is displayed with the specified probes, the selected enzymes, and the expected sizes for the WT and KO bands.



- **How do I remove the selected Southern enzyme from displaying on the schematic diagram?**

In the Construct section on the left-hand column, select Southern Enzyme from the drop-down menu and click the **[+]** button. It will take you to the Select Enzymes for Southern Blot page. Click the **Reset** button. The selected enzyme(s) will be removed from the schematic diagram.

Project Information

Project keys

Load/update WT sequence

Retrieve WT repeat mask

Load/update cDNA library

Exon lookup

Construct

5' Arm +

Southern Enzyme +

Title +

Modify added

Retrieve TV repeat mask

Construct Strategy

☒ Original

☐ Neo Deletion by FLP

☐ Cre-Lox Recombination

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Client report on WT

Client report on TV

Screening & QA

Design oligos

Humanized P53-R248Q RD007 (Gene> trp53)

Select Enzymes for Southern Blot

Select >>
Reset

Select a probe

☐ PB3/4

☒ PB5/6

Applicable southern enzymes

☐ Bgl I

☐ BspE I

☐ BssH II

☐ BstBI

☐ Eag I

☐ Hpa I

☐ Mlu I

☐ Nar I

☐ Sac II

☐ Sfo I

☐ Sma I

☐ Spe I

☒ Xba I

☐ Xho I

☐ Xma I

Southern enzymes selected:

PB3/4 - Xba I

PB5/6 - Xba I

Save as Best Enz.

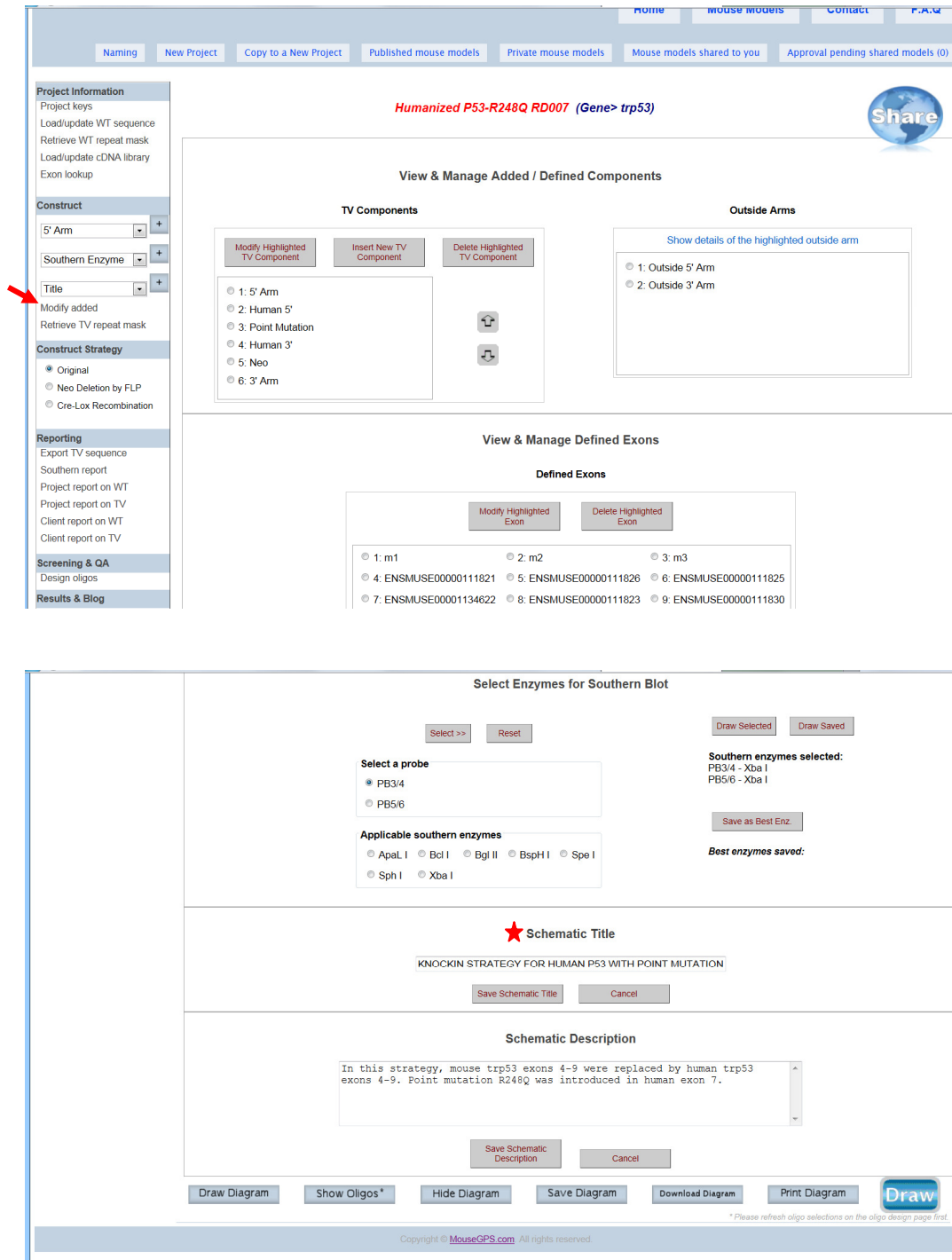
Best enzymes saved:

Draw Diagram
Show Oligos*
Hide Diagram
Save Diagram
Download Diagram
Print Diagram
Draw

* Please refresh oligo selections on the oligo design page first.

- **How do I modify the title on the schematic diagram?**

In the Construct section on the left-hand column, click **Modify Added**. In the box under Schematic Title, type in a new title and then click **Save Schematic Title** button.



The screenshot displays the MouseGPS web interface. On the left-hand column, the 'Construct' section is active, showing a dropdown menu for 'Title' with a red arrow pointing to it. The main content area is titled 'Humanized P53-R248Q RD007 (Gene> trp53)' and contains two main sections: 'View & Manage Added / Defined Components' and 'View & Manage Defined Exons'. The 'View & Manage Added / Defined Components' section includes 'TV Components' and 'Outside Arms' subsections. The 'View & Manage Defined Exons' section includes a 'Defined Exons' subsection. At the bottom of the interface, there is a 'Select Enzymes for Southern Blot' section, a 'Schematic Title' section with a star icon, and a 'Schematic Description' section. The 'Schematic Title' section contains the text 'KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION' and buttons for 'Save Schematic Title' and 'Cancel'. The 'Schematic Description' section contains a text box with the description: 'In this strategy, mouse trp53 exons 4-9 were replaced by human trp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.' and buttons for 'Save Schematic Description' and 'Cancel'. At the very bottom, there are buttons for 'Draw Diagram', 'Show Oligos*', 'Hide Diagram', 'Save Diagram', 'Download Diagram', 'Print Diagram', and a large 'Draw' button. A copyright notice for MouseGPS.com is also present.

- **How do I modify the description on the schematic diagram?**

In the Construct section on the left-hand column, click **Modify Added**. It will take you to the View & Manage Added/Define Components page. In the box under Schematic Description, type in a new description and then click **Save Schematic Description** button.

The screenshot displays the Ensembl genome browser interface for a project titled "Humanized P53-R248Q RD007 (Gene> trp53)". The left sidebar contains a "Construct" section with a red arrow pointing to the "Title" dropdown menu. The main content area shows the "View & Manage Added / Defined Components" page. The "TV Components" section lists six items: 1: 5' Arm, 2: Human 5', 3: Point Mutation, 4: Human 3', 5: Neo, and 6: 3' Arm. The "Outside Arms" section shows two items: 1: Outside 5' Arm and 2: Outside 3' Arm. Below these is a "View & Manage Defined Exons" section with a list of nine exons, each with a unique ENSMUSE ID.

Select Enzymes for Southern Blot

Select a probe

☒ PB3/4
☐ PB5/6

Applicable southern enzymes

☐ ApaI I ☐ Bcl I ☐ Bgl II ☐ BspH I ☐ Spe I
☐ Sph I ☐ Xba I

Southern enzymes selected:
PB3/4 - Xba I
PB5/6 - Xba I

Best enzymes saved:

Schematic Title

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION

★ **Schematic Description**

In this strategy, mouse trp53 exons 4-9 were replaced by human trp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

* Please refresh oligo selections on the oligo design page first.

Copyright © MouseGPS.com All rights reserved.

- **How do I retrieve repeat mask for my sequences?**

In the Construct section on the left-hand column, click **Retrieve TV repeat mask**.

Home
Mouse models
Contact
FAQ

Naming
New Project
Copy to a New Project
Published mouse models
Private mouse models
Mouse models shared to you
Approval pending shared models (0)

Project Information

Project keys

Load/update WT sequence

Retrieve WT repeat mask

Load/update cDNA library

Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added

Retrieve TV repeat mask

Construct Strategy

☒ Original
☐ Neo Deletion by FLP
☐ Cre-Lox Recombination

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Client report on WT

Client report on TV

Screening & QA

Design oligos

Results & Blog

Humanized P53-R248Q RD007 (Gene> trp53)

* Please refresh oligo selections on the oligo design page first.

Title font: Times New Roman **Title font size:** 14 pt **Description font:** Times New Roman **Description font size:** 8 pt

Schematic Options ☐ Show repeats ☒ Show probes ☐ Show grids ☐ Static ☐ Interactive [Zoomed View](#)

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

Vector

KO

Your entire input sequences including the targeting vector and the flanking sequences were sent out to RepeatMasker (<http://repeatmasker.org/>), which is a program that

screens DNA sequences for interspersed repeats and low complexity DNA sequences. The Repeat Mask Report shows a detailed annotation repeats, where Ns are representing repeats.

Print Repeat Mask Report

Close

Repeat Mask Report

Project Information

Project ID:256

Project name:Humanized P53-R248Q

Project number:RD007

Sequence type:Targeting Vector

Parameters

DNA Source

Mouse

Search Engine

abblast

Speed

default

Retrieve Repeat Mask with the above parameters

Load/update cDNA library
Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added
Retrieve TV repeat mask

Construct Strategy

- ☒ Original
- ☐ Neo Deletion by FLP
- ☐ Cre-Lox Recombination

Reporting

Export TV sequence
Southern report
Project report on WT
Project report on TV
Client report on WT
Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping
Blog

Draw Diagram

Show Oligos *

Hide Diagram

Save Diagram

Download Diagram

Print Diagram

Draw

* Please refresh oligo selections on the oligo design page first

Title font:
Times New Roman

Title font size:
14 pt

Description font:
Times New Roman

Description font size:
8 pt

Set Format >>

Schematic Options

☒ Show repeats

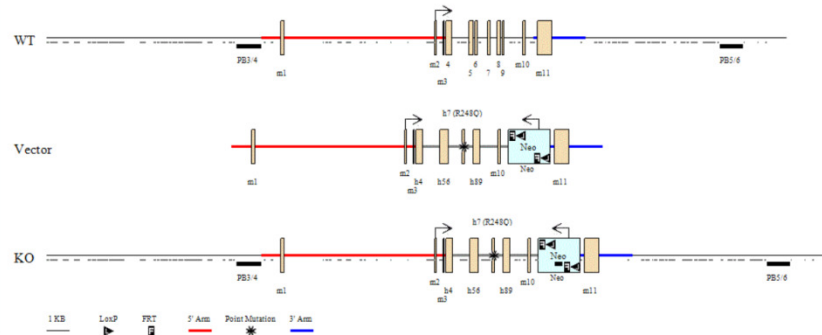
☒ Show probes

☐ Show grids

☒ Static ☐ Interactive

[Zoomed View](#)

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q



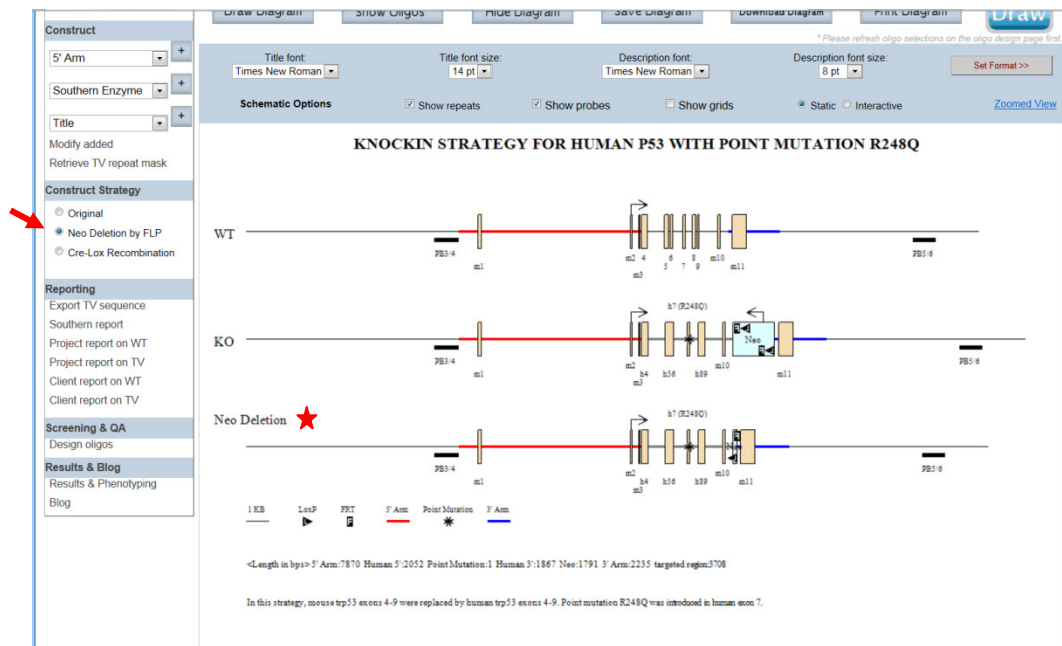
<Length in bp> 5' Arm:7870 Human 5':2052 Point Mutation:1 Human 3':1867 Neo:1791 3' Arm:2235 targeted region:3708

In this strategy, mouse trp53 exons 4-9 were replaced by human trp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

Construct Strategies

- How do I display the schematic diagram after FLP recombinase has been introduced?

In the Construct Strategy section on the left-hand column, click on the circle next to **Neo deletion by FLP**. Click **Draw** or **Draw Diagram**. The third line on the schematic diagram (Neo Deletion) displays the remaining components after introducing FLP recombinase.



- How do I display the schematic diagram after Cre recombinase has been introduced?

In the Construct Strategy section on the left-hand column, click on the circle next to **Cre-Lox Recombination**. Select 1st LoxP Site with a drop-down menu of location for all loxP sites is shown. Select the location of the 1st loxP site of your choice. Go to Select 2nd LoxP Site and select the location of the 2nd loxP site of your choice.

Click **Go >>** button. A schematic diagram is displayed. The third line on the schematic diagram shows the remaining components after introducing Cre recombinase for the selected loxP sites.

5' Arm

Southern Enzyme

Title

Modify added

Retrieve TV repeat mask

Construct Strategy

Original

Neo Deletion by FLP

Cre-Lox Recombination

21010

22625

Go >> Cancel

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Client report on WT

Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping

Blog

Title font: Times New Roman

Title font size: 14 pt

Description font: Times New Roman

Description font size: 8 pt

Set Format >>

Schematic Options

Show repeats

Show probes

Show grids

Static

Interactive

Zoomed View

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

KO

Cre-Lox Recombination

1 KB

LoxP

FRT

5' Arm

Point Mutation

3' Arm

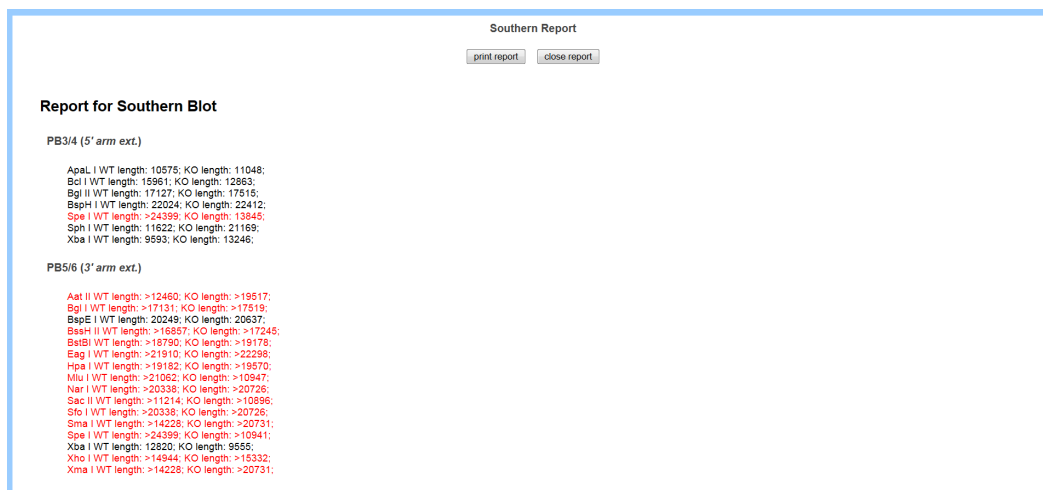
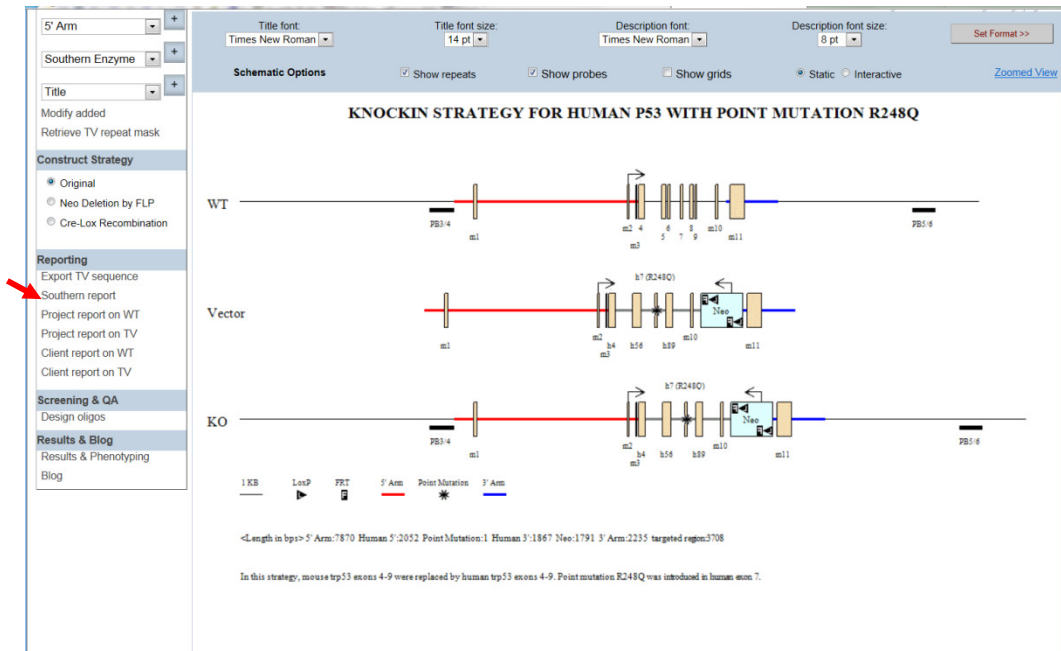
<Length in bps> 5' Arm:7870 Human 5':2052 Point Mutation:1 Human 3':1867 Neo:1791 3' Arm:2235 targeted region:3708

In this strategy, mouse tp53 exons 4-9 were replaced by human tp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

Reporting

- How do I view possible Southern strategies including enzymes and expected sizes for a specific probe?

In the Reporting section on the left-hand column, select **Southern report**. A list of all probes that you have designed is displayed in the report including Probe Name, possible enzymes, and expected sizes for the WT and KO. The enzymes that are highlighted in red are not recommended to use.



- **What is the difference between Project Report and Client Report?**

Project Report displays sequences for the forward and reverse strands for your project of interest. Client Report displays only sequences for the forward strand (5'→3') for your project of interest. Sites of restriction enzymes are indicated only in the Project Report. 5' and 3' retrieved homology arms, insertion sites of vector components, locations of oligos, probes, exons, repeats, etc. are annotated in each report.

Note if the sequence is >50kb, the report will not be displayed especially for BAC targeting constructs.

- **What is the difference between WT and TV on Project Report and Client Report?**

WT displays wild-type genomic sequences before modifications. 5' and 3' retrieved homology arms and locations of probes, exons, and repeats are indicated. TV displays sequences after modifications including annotated sequences of 5' and 3' retrieved homology arms, vector components, selection cassette, locations of oligos, probes, exons, repeats, etc.

Note if the sequence is >50kb, the report will not be displayed especially for BAC targeting constructs.

Screening & QA

- What is on the Design Oligos page?

Note that projects that are shared as View Only will not be able to design new oligos.

In the Screening & QA section on the left-hand column, click **Design Oligos**. It will bring you to the Oligo Design page for Screen Oligos. All PCR screening oligos specifically designed for your project are displayed. The Oligo Design page displays the oligo name, its sequences (5'→3'), location of oligo on the forward/reverse strand, and expected sizes of oligo pairings.

Oligo Design for **Humanized P53-R248Q RD007**

[Print Selected Oligos](#) [Close Oligo Design](#)

* Screen oligos @ TV oligos

Screen Oligos

[Add Self-Designed Screen Oligo](#)

Save ID?	Oligo Name	5' T Sequence	Show Location	Report Distance	CR Highlight		
<input type="checkbox"/>	A1	TAGAGAGCTTGCAGGAGAAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	A2	AACCTGGGAGGTAACTGACTGATGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	A3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	AT1	TGGACCTGCTTCTGAAGACTTGAGG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	AT2	ATGATGGTGGTGGTGACAGTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	F1	CGTCTTCGGAGCGCTGCAACAC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	F2	GGATCCGTTCTTCGGAGCGCTGTC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	F3	GCATAAGCTTGGATCCGTTCTTCGGAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	F7	GGACTTCGCTAGACTAGTACCGTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	QIP1	TTACGTCGCGCTCCAGCTCGACAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	LAC1	AAGCGCAATCCCAATTCAGGCTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	LAC2	CGATTAACTGGGTAAACGCGAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	LUN1	CCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	LUN4	GCATCGCCTTCTATCGCCTCTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	N1	TGCAGGCCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	N2	TTCCCTCGTGTTCATGGTATCG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	N7	ATGTGTCAGTTTCATAGCCTGAAG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	SQ4	ACTGAGTGGGAGCAGTAAGGAGATTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	SQ5	CTCCCTATAACCCCATGAGATGTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	SQ7	TGCCCCAACACACAGCTCCTCTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	SQ9	TCATCTTGGGCTGTGTTATCTCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete

- How do I display oligos on the schematic diagram?

In the Screening & QC section on the left-hand column, click **Design Oligos**. It will bring you to the Oligo Design page for Screen Oligos. PCR screening oligos designed specifically for your project and generic oligos are displayed.

To view oligos on the schematic diagram, select the oligo of your choice and check off the box in the column **Show Location** as shown below in red asterisk.

Oligo Design for *Humanized P53-R248Q RD007*

☒ Screen oligos
 ☐ TV oligos

Screen Oligos

Save ID	Oligo Name	5' Sequence	Show Location	Report Distance	CR Highlight		
<input type="checkbox"/>	A1	TAGAGAGCTTGCAGGAGAAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	A2	AACCTGGGAGGTAAATGACTGATGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	A3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	AT1	TGGACCTGCTTCTGAGACTTGAGG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	AT2	ATGATGGTGGTGGTGACAGTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	F1	CGTTCTTCGGAGCGCTCGCAACAC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	F2	GGATCCGCTTCTTCGAGCGCTCTGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	F3	GCATAGCTTGGATCCGCTCTTCGGAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	F7	GGAACTTCGCTAGACTAGTACGCGTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	GFP1	TTACGTCGCCGCTCCAGCTCGACGAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LAC1	AAGCGCATTCGCCAATTCAGGCTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LAC21	CGATTAAAGTTGGGTAACGACAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LAM1	CCAGAGGCACCTTGTTGATGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LUN8	GCATCGCTTCTATCGCTCTCTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N1	TGCAGGCGCAGAGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N2	TTCTCTGCTTTACGGTATCG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N7	ATGTGTCAGTTTCATAGCGTAAG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ4	ACTGAGTGGGAGCAGTAAGGAGATTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	SQ5	CTCCCTATAACCCATGAGATGTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ7	TGCCCAACAGCAGCTGCTCTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	SQ9	TCATCTTGGAGCTGTGTATCTCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

Press **Select Oligos** button to save your changes. **Close Oligo Design** page.

To view oligos on the schematic diagram, click **Show Oligos** button in the top panel.

Humanized P53-R248Q RD007 (Gene> trp53)

Title font: Times New Roman | Title font size: 14 pt | Description font: Times New Roman | Description font size: 8 pt |

Schematic Options: ☒ Show repeats ☒ Show probes ☐ Show grids ☒ Static ☐ Interactive [Zoomed View](#)

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

<Length in bp> 5' Arm: 7870 Human 5' 2052 Point Mutation: 1 Human 3' 1867 Neo: 1791 3' Arm: 2235 targeted region: 3708

- **How do I display oligos on the Client Report?**

In the Screening & QC section on the left-hand column, click **Design Oligos**. It will bring you to the Oligo Design page for Screen Oligos. PCR screening oligos designed specifically for your project and generic oligos are displayed.

To view oligos on the client report, select the oligo of your choice and check off the box in the column **CR Highlight** as shown below in red asterisk.

Oligo Design for **Humanized P53-R248Q RD007**

[Print Selected Oligos](#) [Close Oligo Design](#)

☒ Screen oligos ☐ TV oligos

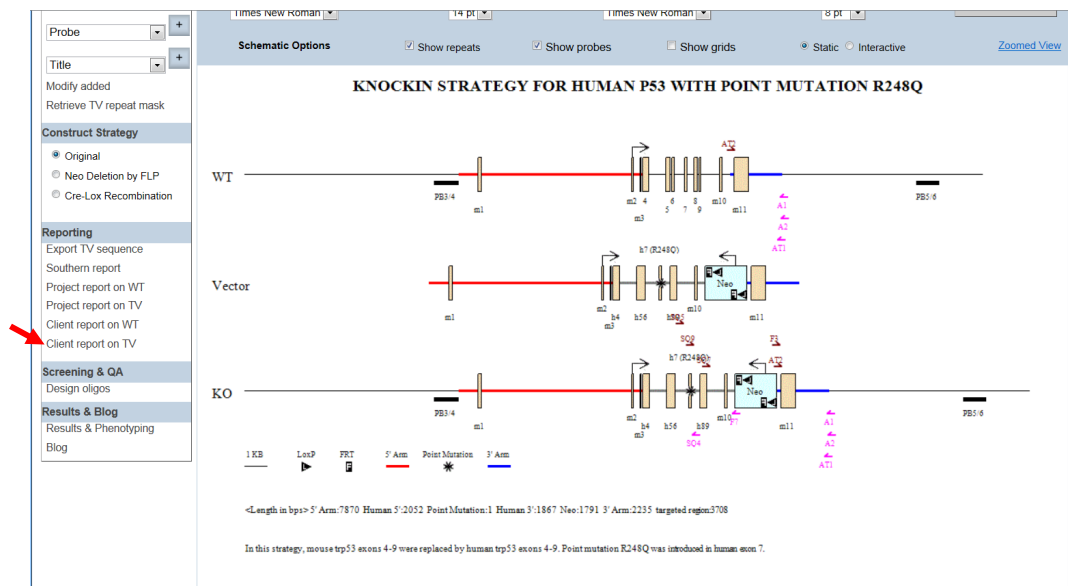
Screen Oligos

[Add Self-Designed Screen Oligo](#)

Save ID	Oligo Name	5'-3' Sequence	Show Location	Report Distance	CR Highlight	Edit	Delete
<input type="checkbox"/>	A1	TAGAGAGCTTGCAGGAGAAGC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	A2	AACCTGGGAGGTAACTGACTGATGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	A3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	AT1	TGGACCTGCTTCTGAAGACTTGAGG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	AT2	ATGATGGTGGTGGTGACAGTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	F1	CGTTCTTCGGAGCGCTGTCACAC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	F2	GGATCCGTTCTTCGGAGCGCTGTC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	F3	GCATAGCTTGGATCCGTTCTTCGGAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	F7	GGAACTTCGCTAGACTAGTACCGTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	QFP1	TTAGCTGCGCTGCCAGCTGACGAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	LAC1	AAGCGCATTGCGCAATTCAGGCTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	LAC2	CGATTAACTGGGTAAACGCGAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	LAM1	CCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	LAM	GCATCGCTTCTATCGCTCTCTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	N1	TGCGAGGCCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	N2	TTCTCTGCTGTTTACGGTATCG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	N7	ATGTGTCAGTTTACAGCTGAAG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	SQ4	ACTGAGTGGGAGCAGTAAGGATTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	SQ5	CTCCCTATACCCCATGAGATGTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete
<input checked="" type="checkbox"/>	SQ7	TGCCCAAGACAGCAGCTCCTCTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Edit	Delete
<input type="checkbox"/>	SQ9	TCATCTTGGGCTGTGTATCTCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edit	Delete

Press **Select Oligos** button to save your changes. **Close Oligo Design** page.

To view oligos on the Client Report on TV, click **Client Report on TV** button under Reporting section.



Below is a display of Client report on TV. Forward oligos (5'-3') are highlighted in orange and reverse oligos (3'-5') are highlighted in magenta.

Formatting convention:

1. Outside 5' Arm (9142 bp): Plain text (e.g., ATCG)
2. Outside 3' Arm (8559 bp): Plain text (e.g., ATCG)
3. 5' Arm (7870 bp): Bold and italic text (e.g., ***ATCG***)
4. Self-Designed (2052 bp): Blue text, (e.g., **ATCG**)
5. Point Mutation (1 bp): Red, bold and italic text (e.g., ***ATCG***)
6. Self-Designed (1867 bp): Blue text, (e.g., **ATCG**)
7. Neo (1791 bp): Red text (e.g., **ATCG**)
8. 3' Arm (2235 bp): Underlined text (e.g., ATCG)
9. LoxP: Red text, highlighted in yellow (e.g., **ATCG**)
10. FRT: Red and underlined text, highlighted in gray (e.g., **ATCG**)
11. Exon: Highlighted in pink (e.g., **ATCG**)
12. Probe: Highlighted in sandy brown (e.g., **ATCG**)
13. Oligo (5\'-3\'): Highlighted in orange (e.g., **ATCG**)
14. Oligo (3\'-5\'): Highlighted in magenta (e.g., **ATCG**)

```
CCTGGAACCTCGATTTATAGAGCAGGCTGACCTCAAACCTCAAAGAGATCCACCTGCCTCTGCCTCCCAAG
TGCTGGGGCTAAAGGTGTGCACCAACCCGCCAGCTCTTGCTTTTTTTTAAAGACTTATTTGCATT
GAGTGTATCTGTCTGTACGCTGTACATACAAGTGTGGGTGCCTACAGAGGCCAGAAGAGTTGAATC
CCTAGGAGCTGGACTGACAGGGAACCATGAGCTGCCTGACACGGGCACAGGAATGGAGCTTAGGTCTTC
TGCAGGAGAACAGTCCATGCTCTGAACCGCTGAGCCATCTCTCCAGCCCTGTGTGTCTCTTTGTTATTTG
TTGTTGTTGAGGCAGTCTCGGTATCCCTGGCTGGCGTGGGACTCACTATGTACCAGATCACAGACAGGT
GTCAGTCCATATGGTGGCTCTGTGTTGTCTCACACATACCGAGATTACAATTGAGTGCCATCTTGACTG
GCTAATCTTTTCTGGGAGTCTTCTGTTCTAGAAAAGAATGGTGGCCTGGTGTAGATGGTTACCTGGGT
AAGAGGCTGCAGATGCTCTGGGGTGTCCCAGACCAGGGGACACTGCAGAGACTGCCTCTGGCGGGGATG
CTTACAAGAGCGGATCTGCAGGCGCTGGATTATGGTGCATAAACAGGGATGAGAAACAAGGATGCTGAG
GTGTGGCTGCTTTCTCACTGCTGTGATAAGTGTCTTACACAGCGACTGAAGGGAGCGTTACTTTTGGT
CACAGTTCGAGGGTGTAGTCCACCACTGCAGGGAAGTCAGAGCAGAAGTACTTTATCCTCAGGCCAGAA
GTCAGAGGTGTGGGAAGCTCATACTCTCCCCACTTTTATCTTTTATCCAGCTCAGAACCCACACCCGT
AGAGAGGGAATCTCACGGTTCCTGCGTTCCTGACAGACACAACAGGTTTATCTCCTGGGTGATTCT
AGACCAGCATTGGCTATCACAGGTGAGCAAGGTGGCCTAGCCAATAAAATGGCTGGGTGTGCCAGCCTG
AGTCAGATCCCCAGGATTCACAGAAAGACCGAAGGAGATAACCACTCCACAAATCTATCTTCTGACTG
CCATGTGTGCCTGTGCATACAGCGTGCCTCTCAAGAATAAATATTCAAACCTTGGCCATCACAAACCA
CTGGGAATGTGGCTCCAGTGCCGTGCTTGTCTAGCATGCATGAAGCCTTATGTTACACACATACACAC
ACACACACACACACACACACACAGAGGCAAAAAGAGGAGAAAAGAATGTAAGAGAATACGATTCT
AGTGTGGTGGCTCGTACCTAAAATCTCAGTATTTGGGAGTTCAAGGCCAGTCTCGGGTATGTAGTGAGC
TTCAGGCCACTCTGAGCTGCAGAAATGAGACCTTGTCTAACTAACAAGCAAACGAAGAGAAAGCCACCGG
```

- **How do I find the expected size for PCR amplification for an oligo or primer pair?**

In the Screening & QC section on the left-hand column, click **Design Oligos**. It will bring you to the Oligo Design page for Screen Oligos.

To find the expected size of the oligo or primer pair, select the oligo of your choice and check off the box in the column **Report Distance** as shown below in red asterisk.

Oligo Design for *Humanized P53-R248Q RD007*

☒ Screen oligos
 ☐ TV oligos

Screen Oligos

★

Save ID	Oligo Name	5' Sequence	Show Location	Report Distance	CR Highlight		
<input checked="" type="checkbox"/>	A1	TAGAGAGCTTGCAGGAGAAGC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	A2	AACCTGGGAGGTAAATGACTGATGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	A3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	AT1	TGGACCTGCTTCTGAGACTTGAGG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	AT2	ATGATGGTGGTGGTGACAGTTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	F1	CGTTCTTCGGACGCTCGTCAACAC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	F2	GGATCCGCTTCTCGACGCCCTGTC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	F3	GCATAAGCTTGATCCGCTCTTCGGAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	F7	GGAACTTCGCTAGACTAGTACGCTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	OFF1	TTACGTGCGCGTCCAGCTCGACCAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LAC1	AAGCGCCATTGCCAATTCAGGCTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LAC21	CGATTAACTGGGTAAAGCCAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LAC21	CCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LUN1	GCATCGCTTCTATCGCTTCTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N1	TGCGAGGCCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N2	TTCTCTGCTGTTTACGGTATCG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N7	ATGTGTGCTTTTACGCTGAAG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ4	ACTGAGTGGGAGCAGTAAGGAGATTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ5	CTCCCTATAACCCATGAGATGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ7	TGCCCAACAGACAGCTCTCTCTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ9	TCATCTTGGGCTGTGTTATCTCC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

Press **Select Oligos** button to save your changes.

In the lower right-hand corner, a Distance Report section displays all possible pairings of oligos that were checked off for Report Distance. Oligo 1 column is for all forward oligos (5'→3') and Oligo 2 column is for all reverse oligos (3'→5'). The Distance column displays an expected size in base pairs from Oligo 1 to Oligo 2. This information will provide you the expected size if Oligo 1 and Oligo 2 were used for pairing in PCR amplification.

<input checked="" type="checkbox"/>	F7	GGAACTTCGCTAGACTAGTACGCTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	OFF1	TTACGTGCGCGTCCAGCTCGACCAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LAC1	AAGCGCCATTGCCAATTCAGGCTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LAC21	CGATTAACTGGGTAAAGCCAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LUN1	CCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	LUN1	GCATCGCTTCTATCGCTTCTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N1	TGCGAGGCCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N2	TTCTCTGCTGTTTACGGTATCG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	N7	ATGTGTGCTTTTACGCTGAAG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ4	ACTGAGTGGGAGCAGTAAGGAGATTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ5	CTCCCTATAACCCATGAGATGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ7	TGCCCAACAGACAGCTCTCTCTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	SQ9	TCATCTTGGGCTGTGTTATCTCC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="checkbox"/>	UN1	AGCGATCGCTTCTATCGCTTC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

Selected Oligos (Humanized P53-R248Q RD007)

Construct type in which the following oligos are selected: Original

Oligo Name/ID	Location	Order	Deliver To	Submitted	Synthesized	
A1	3-5	24984		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
A2	3-5	25014		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
AT1	3-5	24894		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
AT2	3-5	22723		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
F3	5-3	22677		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
F7	3-5	20952		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
SQ4	3-5	19238		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
SQ5	5-3	18528		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
SQ7	5-3	19679		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>
SQ9	5-3	18967		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>

Category: Production

★

Distance Report

Oligo 1 (5'→3')	Oligo 2 (3'→5')	Distance (bp)
AT2	A1	2234
AT2	A2	2118
AT2	AT1	2139
F3	A1	2130
F3	A2	2364
F3	AT1	2454
SQ5	A1	6479
SQ5	F3	5311
SQ5	AT1	6393
SQ5	F7	5238
SQ5	SQ4	717
SQ5	A1	5201
SQ7	A2	5362
SQ7	AT1	5200
SQ7	F7	1300
SQ9	A1	6040
SQ9	A2	6074
SQ9	AT1	5354
SQ9	F7	2012
SQ9	SQ4	848

- How do I design my own PCR oligo or primer?

In the Screening & QC section on the left-hand column, click **Design Oligos**. An Oligo Design page for Screen Oligos will be displayed. Click **Add Self-Designed Screen**

Oligo. A blank entry will be created on top of the box. Click **Edit** to enter your Oligo Name and its sequence (5'→3'). Check off the boxes for **Show Location**, **Report Distance**, and **CR Highlight**. When done, click **Finish** or **Cancel** if you decide to cancel the entry. Click **Delete** if you would like to delete the entry. Click **Select Oligos** button below the box to select your new entry.

An example of a newly designed oligo is shown below.

Oligo Design for **Humanized P53-R248Q RD007**

[Print Selected Oligos](#) [Close Oligo Design](#)

☒ Screen oligos ☐ TV oligos

Screen Oligos

[Add Self-Designed Screen Oligo](#)

Selected	Name	5'-3' Sequence	Show Location	Report Distance	CR Highlight	Finish	Cancel	Delete
<input checked="" type="checkbox"/>	New Oligo	TCATCTTGGGCTGTGTATCTCC	seq. comp.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/>	A1	TAGAGAGCTTCAGGAGANGC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input checked="" type="checkbox"/>	A2	AACCTGGAGGTAAGTACTGATGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	A3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input checked="" type="checkbox"/>	AT1	TGGACCTGCTTCTGAAGACTTGAGG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input checked="" type="checkbox"/>	AT2	ATGATGGTGGTGGTGACAGTTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	F1	CGTTCCTCGGACGCTCGTCAACAC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	F2	GGATCCGTTCTTCGGACGCTCGTC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input checked="" type="checkbox"/>	F3	GCATAGCTTGGATCCGTTCTTCGGAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input checked="" type="checkbox"/>	F7	GGAACCTCGCTAGACTAGTACGGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	OPF1	TTACGTCCGCTCAGCTCGACGAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	LAC1	AAGCGCATTCGCCAATTCAGGCTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	LAC21	CGATTAAGTTGGTAAAGCCAGG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	LAN1	CCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	LUN6	GCATCGCTTCTATCGCTCTCTTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	N1	TGCAGGCCAGAGGCCACTTGTGTAGC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	N2	TTCTCTGCTTTACGGTATCG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input type="checkbox"/>	N7	ATGTGTAGTTTCATAGCCTGAAG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input checked="" type="checkbox"/>	SQ4	ACTGATGGGAGCAGTAAGGATTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input checked="" type="checkbox"/>	SQ5	CTCCCTATACCCCATGAGATGTG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	
<input checked="" type="checkbox"/>	SQ7	TGCCCAACACACAGCTCCTCTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>	

Your New Oligo is displayed in the Selected Oligos box. It will show your oligo name, the direction of your oligo (5'→3' for forward; 3'→5' for reverse), and the location on the KO allele. Note that if your oligo sequence is incorrectly entered, instead of displaying the direction of the oligo, NA will be displayed in the Where column next to your Oligo Name. Ordering oligos is not functional for this version.

Below is a correct oligo sequence that was entered.

Selected Oligos (Humanized P53-R248Q RD007)

Construct type in which the following oligos are selected: Original

Oligo Name	Where	KO Location	Orderer	Deliver To	Submitted	Synthesize?	
A1	3-5	24984			✗	<input type="checkbox"/>	Edit Delete
A2	3-5	25014			✗	<input type="checkbox"/>	Edit Delete
AT1	3-5	24894			✗	<input type="checkbox"/>	Edit Delete
AT2	5-3	22723			✗	<input type="checkbox"/>	Edit Delete
F3	5-3	22677			✗	<input type="checkbox"/>	Edit Delete
F7	3-5	20952			✗	<input type="checkbox"/>	Edit Delete
★ New Oligo	5-3	18967			✗	<input type="checkbox"/>	Edit Delete
SQ4	3-5	19238			✗	<input type="checkbox"/>	Edit Delete
SQ5	5-3	18528			✗	<input type="checkbox"/>	Edit Delete
SQ7	5-3	19679			✗	<input type="checkbox"/>	Edit Delete
SQ9	5-3	18967			✗	<input type="checkbox"/>	Edit Delete

Category: Production

Synthesize
selected

Below is an incorrect oligo sequence that was entered. The incorrect oligo will not be displayed on the schematic diagram, highlighted on the client report, or provided distance report.

Selected Oligos (Humanized P53-R248Q RD007)

Construct type in which the following oligos are selected: Original

Oligo Name	Where	KO Location	Orderer	Deliver To	Submitted	Synthesize?	
A1	3-5	24984			✗	<input type="checkbox"/>	Edit Delete
A2	3-5	25014			✗	<input type="checkbox"/>	Edit Delete
AT1	3-5	24894			✗	<input type="checkbox"/>	Edit Delete
AT2	5-3	22723			✗	<input type="checkbox"/>	Edit Delete
F3	5-3	22677			✗	<input type="checkbox"/>	Edit Delete
F7	3-5	20952			✗	<input type="checkbox"/>	Edit Delete
★ New Oligo	NA	-1			✗	<input type="checkbox"/>	Edit Delete
SQ4	3-5	19238			✗	<input type="checkbox"/>	Edit Delete
SQ5	5-3	18528			✗	<input type="checkbox"/>	Edit Delete
SQ7	5-3	19679			✗	<input type="checkbox"/>	Edit Delete
SQ9	5-3	18967			✗	<input type="checkbox"/>	Edit Delete

Category: Production

Synthesize
selected

Results & Blog

- How do I upload a file (i.e. photo, document, publication, etc.) for my project?

In the Results & Blog section on the left-hand corner, click **Results & Phenotyping**.

A Project Log for the project will be displayed. Click on **Add Entry**. A new entry is added below. Click on **Edit** to update your entry. Under Category, a drop-down menu of the file type can be selected. Enter the Subject and the name of the Creator for this entry. Click on **Update** and then **Upload/View** to upload your file.

RESULTS & PHENOTYPES

Close

Project Log for Humanized P53-R248Q RD007

[Add Entry](#)

	Category	Subject	Creator	Date Created		
657	Publication	Mutant p53 models	iTL	4/29/2013 6:26:24 PM	Upload/View	Update Cancel
	Phenotype					
	Genotype					
	Production					
	Publication					

If Publication is selected:

If you selected Publication for Category, the following details for the publication and comments can be entered. To upload the file or photo, click on **Attach Files/Photos**

button. Select the file or photo option. Find your file or photo through **Browse**. Then click on **Add Result** button.

RESULTS & PHENOTYPES

Close

Humanized P53-R248Q RD007 Publication Details

First Previous Next Last

Add New Result

Author:

W Hanel

Title:

Two hot spot mutant p53

Journal name:

Cell Death and Differenti

Year of publication:

2013

Pubmed ID:

Comments:

Hot spot mutants R248Q and G245S

Hide File Attachment

Category:

☐ photo ☒ file

Upload file/photo (8MB max):

N:\Production\Two hot sp

Photo description (500 characters max):

Category:

☒ photo ☐ file

Upload file/photo (8MB max):

Photo description (500 characters max):

Category:

☒ photo ☐ file

Upload file/photo (8MB max):

Photo description (500 characters max):

Below is a display of a pdf file uploaded for Publication.

RESULTS & PHENOTYPES

Close

Humanized P53-R248Q RD007 Publication Details

First Previous Next Last

4/29/2013 [Delete this View/Add Comments](#)

Result ID:

820

Publication information:

Two hot spot mutant p53 mouse models display, W Hanel, Cell Death and Differentiation, 2013, Pubmed ID: NA

Remarks:

Hot spot mutants R248Q and G245S

Photo/Results:

[\[3b1e55b9-34f3-4bcb-8dc1-e4c511600b7e_Two hot spot mutant p53 mouse models - Moll.pdf\]](#)

Description:

Add New Result

Author:

Title:

Journal name:

Year of publication:

Pubmed ID:

Comments:

Attach Files/Photos

Add Result

Reset

Close

- **How do I add or view comment to my uploaded files?**

In the Results & Blog section on the left-hand corner, click **Results & Phenotyping**.

Load/update cDNA library

Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added

Retrieve TV repeat mask

Construct Strategy

Original

Neo Deletion by FLP

Cre-Lox Recombination

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Client report on WT

Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping

Blog

Draw Diagram

Show Oligos*

Hide Diagram

Save Diagram

Download Diagram

Print Diagram

Draw

Please refresh oligo selections on the oligo design page first

Title font: Times New Roman

Title font size: 14 pt

Description font: Times New Roman

Description font size: 8 pt

Set Format >>

Schematic Options

Show repeats

Show probes

Show grids

Static

Interactive

Zoomed View

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

Vector

KO

1 KB

LoxP

FRT

5' Arm

Point Mutation

3' Arm

<Length in bp>> 5' Arm:7870 Human 5':2052 Point Mutation:1 Human 3':1867 Neo:1791 3' Arm:2235 targeted region:708

In this strategy, mouse trp53 exons 4-9 were replaced by human trp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

A Project Log for the project will be displayed. A project log for project is displayed. Click on **Upload/View** to view your file for a specific entry.

RESULTS & PHENOTYPES

Close

Project Log for Humanized P53-R248Q RD007

[Add Entry](#)

	Category	Subject	Creator	Date Created		
657	Publication	Mutant p53 models	iTL	4/29/2013 6:26:24 PM	Upload/View	Edit Delete
658	Genotype	F1 mice after Neo deletion	iTL	4/29/2013 6:58:10 PM	Upload/View	Update Cancel
	Phenotype					
	Genotype					
	Production					
	Publication					

Click on **View/Add Comments** on the entry page for the uploaded file(s). A list of comments will be displayed for that specific entry.

RESULTS & PHENOTYPES

Close

Humanized P53-R248Q RD007 Genotype Details

First Previous Next Last

5/13/2013 [Delete this](#) [View/Add Comments](#)

Result ID:

890

Remarks:

Please review genotyping data.

Photo/Results:

[\[e61264d0-328d-4d6c-94ea-21b1c7915ff4_p53 Genotyping Document \(04-27-2009\).doc\]](#)

Description:

Add New Result

Category:

☒ Genotype

Comments:

Attach Files/Photos

Add Result

Reset

Close

List of Comments on Result# 890

[First](#) [Previous](#) [Next](#) [Last](#)

Comments on 5/13/2013 12:00:00 AM by itlprod
Project#756 Log#-1 Result#890

Subject:

F1 genotyping data

Comments:

Please redo PCR for mouse #1297. Thanks.

Add Your Comments

Subject:

Comments:

Upload photos: (Max photo size 8MB. Photo uploading is enabled for signed-on users only.)

Select photo:

[Browse...](#)

Photo description:

- **How do I blog about a specific project?**

The blog is used for communicating to your lab members about your project. In Results & Blog section on the left-hand corner, click **Blog**.

Load/update cDNA library

Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added

Retrieve TV repeat mask

Construct Strategy

Original

Neo Deletion by FLP

Cre-Lox Recombination

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Client report on WT

Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping

Blog

Draw Diagram

Show Oligos*

Hide Diagram

Save Diagram

Download Diagram

Print Diagram

Draw

Title font: Times New Roman

Title font size: 14 pt

Description font: Times New Roman

Description font size: 8 pt

Set Format >>

Schematic Options

Show repeats

Show probes

Show grids

Static

Interactive

Zoomed View

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

Vector

KO

1 KB

LoxP

FRT

5' Arm

Point Mutation

3' Arm

<Length in bp>> 5' Arm:7870 Human 5':2052 Point Mutation:1 Human 3':1867 Neo:1791 3' Arm:2235 targeted region:708

In this strategy, mouse trp53 exons 4-9 were replaced by human trp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

A blog page is displayed for the project. Add your comments or files to the blog. All comments for the project will be listed here.

MMA BLOG Close

List of Comments on Project 756

First Previous Next Last

Add Your Comments

Subject:
Genotyping F1 mice

Comments:
After FLP mice, Neo cassette will be deleted - make sure to use appropriate oligos.

Upload photos: (Max photo size 8MB. Photo uploading is enabled for signed-on users only.)

Select photo:

Browse...

Photo description:

Select photo:

Browse...

Photo description:

Select photo:

Browse...

Photo description:

Select photo:

Browse...

Photo description:

Key Functions on Top Panel

- How do I get to the Ensembl website?

Click on the Gene name and it will link you to the Ensembl gene summary page for your gene of interest.

MOUSE MODEL ARCHIVE

Home Mouse Models Contact F.A.Q.

Naming New Project Copy to a New Project Published mouse models Private mouse models Mouse models shared to you Approval pending shared models (0)

Project Information

- Project keys
- Load/update WT sequence
- Retrieve WT repeat mask
- Load/update cDNA library
- Exon lookup

Construct

- Arm: 5' Arm
- Enzyme
- Title
- Modify added
- Retrieve TV repeat mask

Construct Strategy

- Original
- Neo Deletion by FLP
- Cre-Lox Recombination

Reporting

- Export TV sequence
- Southern report
- Project report on WT
- Project report on TV

Humanized P53-R248Q RD007 (Gene> trp53)

Draw Diagram Show Oligos* Hide Diagram Save Diagram Download Diagram Print Diagram Draw

Title font: Times New Roman Title font size: 14 pt Description font: Times New Roman Description font size: 8 pt Set Format >>

Schematic Options ☒ Show repeats ☒ Show probes ☐ Show grids ☐ Static ☐ Interactive Zoomed View

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

Vector

Ensembl BLAST/BLAT BioMart Tools Downloads Help & Documentation Blog Mirrors

Search Mouse

Mouse (GRCm38) Location: 11:69,580,359-69,591,873 Gene: Trp53

Gene-based displays

- Gene summary
- Splice variants (6)
- Transcript comparison
- Supporting evidence
- Sequence
- External references
- Regulation
- Expression
- Comparative Genomics
 - Genomic alignments
 - Gene tree (image)
 - Gene tree (text)
 - Gene tree (alignment)
 - Gene gain/loss tree
 - Orthologues (69)
 - Paralogues (2)
 - Protein families (1)
- Phenotype
- Genetic Variation
 - Variation table
 - Variation image
 - Structural variation
- External data
 - Personal annotation
 - ID History
 - Gene history

Configure this page

Add your data

Export data

Bookmark this page

Share this page

Gene: Trp53 ENSMUSG00000059552

Description transformation related protein 53 [Source: MGI Symbol; Acc: MGI:98834]

Location [Chromosome 11: 69,580,359-69,591,873 forward strand](#)

INSDC coordinates chromosome GRCm38:CM001004.2:69580359-69591873.1

Transcripts This gene has 6 transcripts (splice variants) [Hide transcript table](#)

Name	Transcript ID	Length (bp)	Protein ID	Length (aa)	Biotype	CCDS
Trp53-202	ENSMUST00000171247	1867	ENSMUSP00000127130	381	Protein coding	CCDS48826
Trp53-201	ENSMUST00000109658	1771	ENSMUSP00000104298	390	Protein coding	CCDS36193
Trp53-002	ENSMUST00000109657	1822	ENSMUSP00000104297	378	Protein coding	-
Trp53-001	ENSMUST00000105371	1772	ENSMUSP00000105371	387	Protein coding	-
Trp53-003	ENSMUST00000147512	3275	No protein product	-	Processed transcript	-
Trp53-004	ENSMUST00000130540	403	No protein product	-	Processed transcript	-

Gene summary

Name [Trp53](#) (MGI Symbol)

CCDS This gene is a member of the Mouse CCDS set: [CCDS36193](#) [CCDS48826](#)

Ensembl version ENSMUSG00000059552.7

Gene type Known protein coding

Prediction Method Annotation for this gene includes both automatic annotation from Ensembl and [Havana](#) manual curation, see [article](#).

Alternative genes This gene corresponds to the following database identifiers:
Havana gene: [OTTNUMS0000005952](#) (version 1)

[Go to Region in Detail for more tracks and navigation options \(e.g. zooming\)](#)

- How do I display the targeting vector on the schematic diagram?

On the top panel, click **Draw** or **Draw Diagram** button and a schematic diagram of the targeting vector of your project will be displayed.

The screenshot shows the Jax Modeler web interface. At the top, there are navigation tabs: 'HOME', 'MOUSE MODELS', 'CONTACT', and 'FAQ'. Below these are project management buttons: 'Naming', 'New Project', 'Copy to a New Project', 'Published mouse models', 'Private mouse models', 'Mouse models shared to you', and 'Approval pending shared models (0)'. On the left is a sidebar with 'Project Information' (Project keys, Load/update WT sequence, Retrieve WT repeat mask, Load/update cDNA library, Exon lookup), 'Construct' (5' Arm, Enzyme, Title, Modify added, Retrieve TV repeat mask), 'Construct Strategy' (Original, Neo Deletion by FLP, Cre-Lox Recombination), 'Reporting' (Export TV sequence, Southern report, Project report on WT, Project report on TV, Client report on WT, Client report on TV), 'Screening & QA' (Design oligos), and 'Results & Blog'. The main panel displays the project title 'Humanized P53-R248Q RD007 (Gene> trp53)' and a 'Share' button. Below the title are buttons: 'Draw Diagram', 'Show Oligos*', 'Hide Diagram', 'Save Diagram', 'Download Diagram', and 'Print Diagram'. A 'Draw' button is also present. The schematic diagram is titled 'KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q'. It shows three horizontal lines representing genomic sequences: 'WT' (wild-type), 'Vector', and 'KO' (knockout). The 'WT' line shows exons as boxes and introns as lines, with a red line indicating the 5' arm and a blue line indicating the 3' arm. The 'Vector' line shows the targeting vector components, including a Neo cassette (red box) and a point mutation (R248Q). The 'KO' line shows the targeting vector integrated into the genome, with the Neo cassette removed. The diagram includes labels for various components: 'PB3:4', 'm1', 'm2', 'm3', 'm4', 'm5', 'm6', 'm7', 'm8', 'm9', 'm10', 'm11', 'b7 (R248Q)', 'Neo', and 'FRT' sites. Below the diagram are 'Schematic Options' (Show repeats, Show probes, Show grids, Static, Interactive) and a 'Zoomed View' link.

- **What is displayed on the schematic diagram?**

The title of the schematic diagram is displayed on the top and a description of targeting strategy is indicated below the diagram.

Three images are shown on the diagram. The first image (WT) displays the wild-type genomic sequences with boxes as exons and color-coded lines for 5' and 3' or long and short, and middle arms. The second image (Vector) displays the vector components without the vector backbone. Flags are used to indicate FRT or loxP sites and boxes are used for cassettes. The third image (KO) shows the targeting vector integrated into the genome. The WT sequence is replaced by the targeting vector.

Legends of symbols and colors used in the diagram, lengths of the retrieval arms and vector components, and pertinent information about your targeting vector are provided below the diagram.

Load/update cDNA library

Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added

Retrieve TV repeat mask

Construct Strategy

Original

Neo Deletion by FLP

Cre-Lox Recombination

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Client report on WT

Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping

Blog

Draw Diagram

Show Oligos*

Hide Diagram

Save Diagram

Download Diagram

Print Diagram

Draw

Title font: Times New Roman

Title font size: 14 pt

Description font: Times New Roman

Description font size: 8 pt

Set Format >>

Schematic Options

Show repeats

Show probes

Show grids

Static

Interactive

Zoomed View

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

Vector

KO

1 KB

LoxP

FRT

5' Arm

Point Mutation

3' Arm

<Length in bp> 5' Arm:7870 Human 5':2052 Point Mutation:1 Human 3':1867 Neo:1791 3' Arm:2235 targeted region:3708

In this strategy, mouse trp53 exons 4-9 were replaced by human trp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

- How do I hide the schematic diagram?

On the top panel, click **Hide Diagram** button and the schematic diagram will not be displayed.

- How do I display my selected oligos on the schematic diagram?

On the top panel, click **Show Oligos** button and all oligos are displayed forward or reverse direction on the KO strand in the schematic diagram. Note: If you make any changes on the Oligo Design page, you must press **Select Oligos** first on the Oligo Design page. Then click **Show Oligos** to display changes.

Project keys

Load/update WT sequence

Retrieve WT repeat mask

Load/update cDNA library

Exon lookup

Construct

5' Arm

Probe

Title

Modify added

Retrieve TV repeat mask

Construct Strategy

Original

Neo Deletion by FLP

Cre-Lox Recombination

Reporting

Export TV sequence

Southern report

Project report on WT

Project report on TV

Client report on WT

Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping

Blog

Humanized P53-R248Q RD007 (Gene> trp53)

Draw Diagram

Show Oligos

Hide Diagram

Save Diagram

Download Diagram

Print Diagram

Draw

Title font: Times New Roman

Title font size: 14 pt

Description font: Times New Roman

Description font size: 8 pt

Set Format >>

Schematic Options

Show repeats

Show probes

Show grids

Static

Interactive

Zoomed View

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

Vector

KO

1 KB

LoxP

FRT

5' Arm

Point Mutation

3' Arm

<Length in bp>> 5' Arm:7870 Human 5'2052 Point Mutation:1 Human 3'1867 Neo:1791 3' Arm:2235 targeted region:3708

Schematic Options

- How do I change the font style and size for the title on the schematic diagram?

Click on the drop-down menu for Title font or Title size. Select the font style or size of your choice and press the **Set Format** button to display your change. Default is Times New Roman at size 14 pt.

The screenshot displays a web-based schematic diagram tool. On the left is a sidebar with navigation options: Construct, Reporting, Screening & QA, and Results & Blog. The main panel features a top toolbar with buttons: Draw Diagram, Show Oligos*, Hide Diagram, Save Diagram, Download Diagram, Print Diagram, and a 'Draw' button. Below the toolbar, font settings are visible: Title font (Times New Roman), Title font size (14 pt), Description font (Times New Roman), and Description font size (8 pt). A 'Set Format >>' button is present. Checkboxes for 'Show repeats', 'Show probes', and 'Show grids' are also shown. A 'Zoomed View' link is highlighted with a red arrow. The central diagram, titled 'KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q', illustrates the targeting of the human P53 gene. It shows the WT (wild-type) gene structure with exons 1-11 and introns 1-10, and the targeted region (exons 4-9) replaced by a Neo cassette. The Vector and KO (knock-out) strategies are also depicted. A legend at the bottom indicates the scale (1 KB), LoxP sites (FRT), 5' Arm, Point Mutation (R248Q), and 3' Arm.

- How do I change the font style and size for the description on the schematic diagram?

Click on the drop-down menu for Title font or Title size. Select the font style or size of your choice and press the **Set Format** button to display your change. Default is Times New Roman at size 8 pt.

Load/update cDNA library
Exon lookup

Construct

5' Arm
Enzyme
Title

Modify added
Retrieve TV repeat mask

Construct Strategy

Original
Neo Deletion by FLP
Cre-Lox Recombination

Reporting

Export TV sequence
Southern report
Project report on WT
Project report on TV
Client report on WT
Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping
Blog

Draw Diagram Show Oligos* Hide Diagram Save Diagram Download Diagram Print Diagram Draw

Title font: Times New Roman Title font size: 14 pt Description font: Times New Roman Description font size: 8 pt Set Format >>

Schematic Options ☒ Show repeats ☒ Show probe grids ☐ Static ☒ Interactive Zoomed View

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

Vector

KO

1 KB LoxP FRT 5' Arm Point Mutation 3' Arm

<Length in bp> 5' Arm:7870 Human 5'2052 Point Mutation:1 Human 3'1867 Neo:1791 3' Arm:2235 targeted region:3708

In this strategy, mouse p53 exons 4-9 were replaced by human p53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

- What are the small dashed lines drawn on the schematic diagram?

The small dashed lines are stretches of repeats that were retrieved from RepeatMasker (<http://repeatmasker.org/>) and displayed on the WT or KO allele. (See **How do I retrieve repeat mask for my sequences** for details.) The display of repeats can help you to avoid designing primers/probes around these repetitive sequences.

- How do I remove the repeats from RepeatMasker displaying on the schematic diagram?

By default, the repeats are displayed on the schematic diagram. Deselect the box next to **Show Repeats**. The repeats will be hidden from the schematic diagram in the Schematic Options on the top panel.

Load/update cDNA library
Exon lookup

Construct

5' Arm

Enzyme

Title

Modify added
Retrieve TV repeat mask

Construct Strategy

☒ Original
☐ Neo Deletion by FLP
☐ Cre-Lox Recombination

Reporting

Export TV sequence
Southern report
Project report on WT
Project report on TV
Client report on WT
Client report on TV

Screening & QA

Design oligos

Results & Blog

Results & Phenotyping
Blog

Draw Diagram Show Oligos* Hide Diagram Save Diagram Download Diagram Print Diagram **Draw**

*Please refresh oligo selections on the oligo design page first

Title font: Times New Roman Title font size: 14 pt Description font: Times New Roman Description font size: 8 pt

Schematic Options

☐ Show repeats ☒ Show probes ☐ Show grids ☒ Static ☐ Interactive [Zoomed View](#)

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

WT

Vector

KO

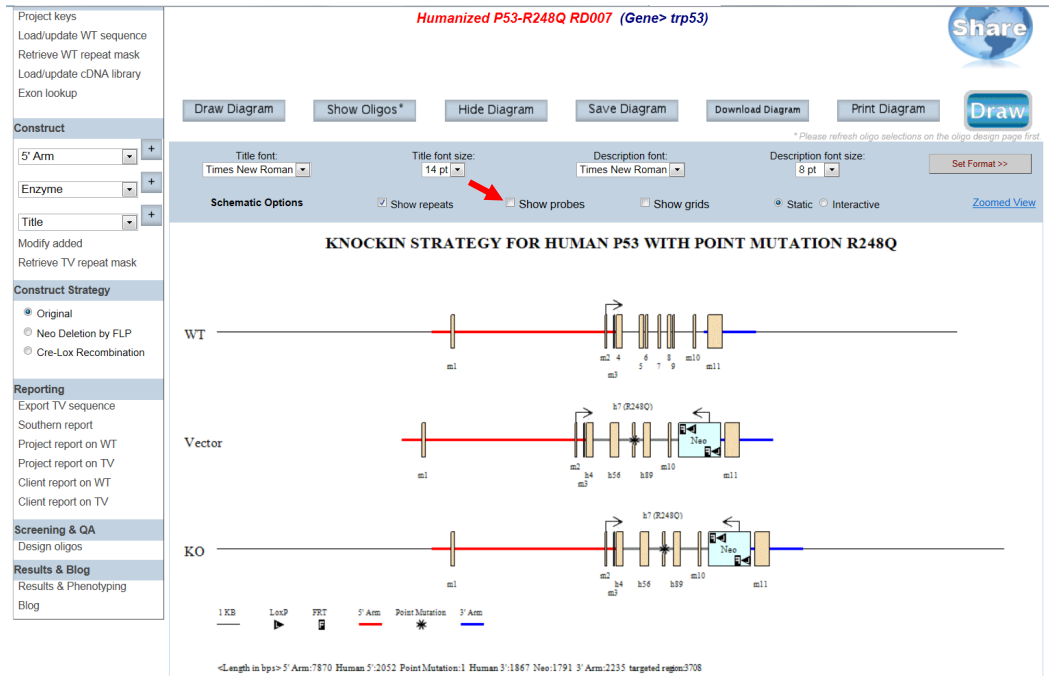
1 KB LoxP FRT 5' Arm Point Mutation 3' Arm

<Length in bp> 5' Arm:7870 Human 5':2052 Point Mutation:1 Human 3':1867 Neo:1791 3' Arm:2235 targeted region:3708

In this strategy, mouse tp53 exons 4-9 were replaced by human tp53 exons 4-9. Point mutation R248Q was introduced in human exon 7.

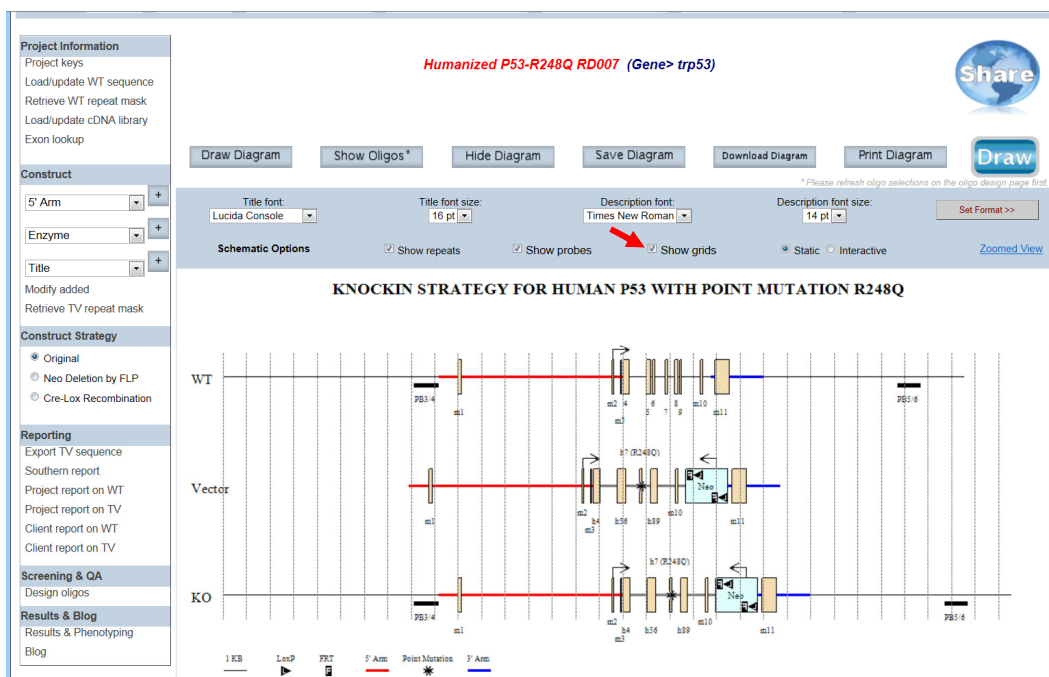
- **How do I hide my probe(s) on the schematic diagram?**

By default, the probes are displayed on the schematic diagram. If you would like to hide the probes, deselect the box next to **Show Probes** in the Schematic Options on the top panel.



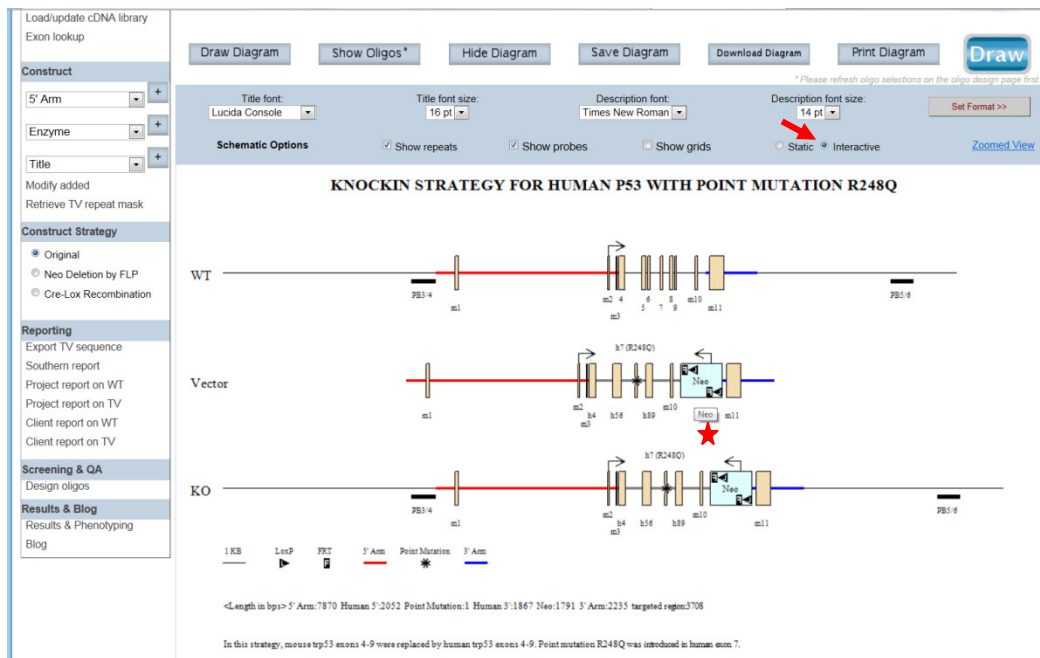
- How do I display the relative distance or size on the schematic diagram?

By default, the grid is off. In the Schematic Options on the top panel, click the box next to **Show grids**. A grid of vertical lines will be overlaid on top of the schematic diagram. The space between two vertical lines is 1kb in length. This will allow you to estimate the distance or size on the schematic diagram.



- **What is the static or interactive button on the schematic diagram?**








By default, the schematic diagram is in a static mode. In the Schematic Options on the top panel, click the box next to **Interactive**. This will allow you to view the schematic diagram in the interactive mode. When moving your computer mouse on top of an image, a pop-up box will indicate the description of the component. The example below shows a pop-up box indicating the Neo cassette (in red asterisk).



When clicking on any image in the diagram, another window will be opened with detail about the vector or non-vector component. For example, below provides the sequence and size of the Neo cassette and other details.

Neo of Project *Humanized P53-R248Q RD007*

** All the fields are updatable except the name of the component - since name-changing is a rare event. To change names, please go to "Modify All" section.*

Type:	TV components
Component#:	5 in TV components
Name:	Neo
Sequence:	<div>CGTACGCCGGCTTAAGTGTACACGCGTACTAGTCTAGCGAAG TTCCTATACTTTCTAGAGAATAGGAAC TTC CGCGGATAACT TCGTATAGCATACATTATACGAAGTTATGTCAGCTTCTGATG GAATTAGAAGCTTGGCAAAACAATACTGAGAATGAAGTGTATG TGGAACAGATCTGATATCCAGGGAGCTCTCAGACGTCGCTTG GTCGGTCTTTATTCGAACCCAGAGTCCCGCTCAGAAGAAGT CGTCAAGAAGGCGATAGAAGGCGATGCGCTGCGAATCGGGAG CGGCGATACCGTAAAGCACGAGGAAGCGGTCAGCCATTTCGC CGCCAAGCTCTTCAGCAATATCACGGGTAGCCAACGCTATGT CCTGATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATGA ATCCAGAAAAGCGGCAATTTTCACCATGATATTCGGCAAGC 1791 bps BLAST this sequence</div>
Direction (only):	3'-5'
Symbol:	<div><input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>  <input type="radio"/> <input type="radio"/> <input type="radio"/>  <input type="radio"/> </div>
Notation:	<input type="text" value="Neo"/>

- **Can I save the schematic diagram?**

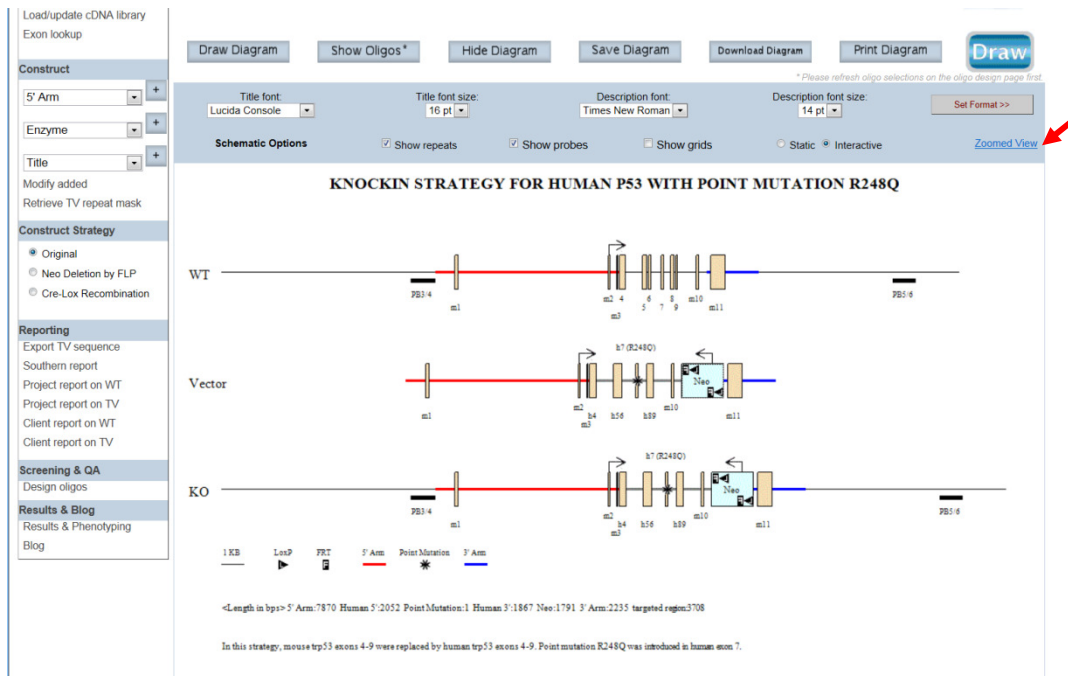
If the project has been shared to you by View Only, the schematic diagram cannot be saved. Otherwise, you would be able to save the schematic diagram with the changes.

- **Can I download the schematic diagram?**

If the project has been shared to you by View Only, the schematic diagram cannot be downloaded. Otherwise, you would be able to download the schematic diagram.

- **How do I zoom in to see details of the schematic diagram?**

In the Schematic Options on the top panel, click **Zoomed View**.



Another window will be opened for the Diagram Zoomed View page. There are 2 ways to specify your region of interest (ROI). The first method is by entering the start and end sequences of your ROI outside the 5' and 3' arm. A minimum of 40bps is required per arm. The second method is by entering the length (in basepairs) flanking outside the 5' and 3' arm for your ROI. The maximum is 10,000bps. Then click **Draw Diagram** button. An enlarged and zoomed-in schematic diagram is displayed below. The **Save Diagram** and **Download Diagram** are not functional for this version. Select any changes in the Schematic Options and then click **Draw Diagram** to display changes in the schematic diagram.

Below is an example of an ROI that is specified by length outside of 5' or 3' arm. The length was entered for 1500 bps.

Diagram Zoomed View for **Humanized P53-R248Q RD007**

Specify ROI:

- ☐ By start/end sequences
☒ Length outside of long arm/short arm

Length outside of 5' Arm (< 9142bps):
 1500
 Length outside of 3' Arm (< 8559bps):
 1500

Draw diagram

Save Diagram

Download diagram

Print diagram

☐ with probes

☐ with oligos

☒ static

Annotation Size:

7 pt

Increase Exon label size to:

100%

☒ without probes

☒ without oligos

☐ interactive

KNOCKIN STRATEGY FOR HUMAN P53 WITH POINT MUTATION R248Q

