



# Creating Custom SureSelect Libraries in SureDesign

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Mark Hartnett

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# Creating Custom SureSelect Libraries in **SureDesign**

## **SureDesign** Overview

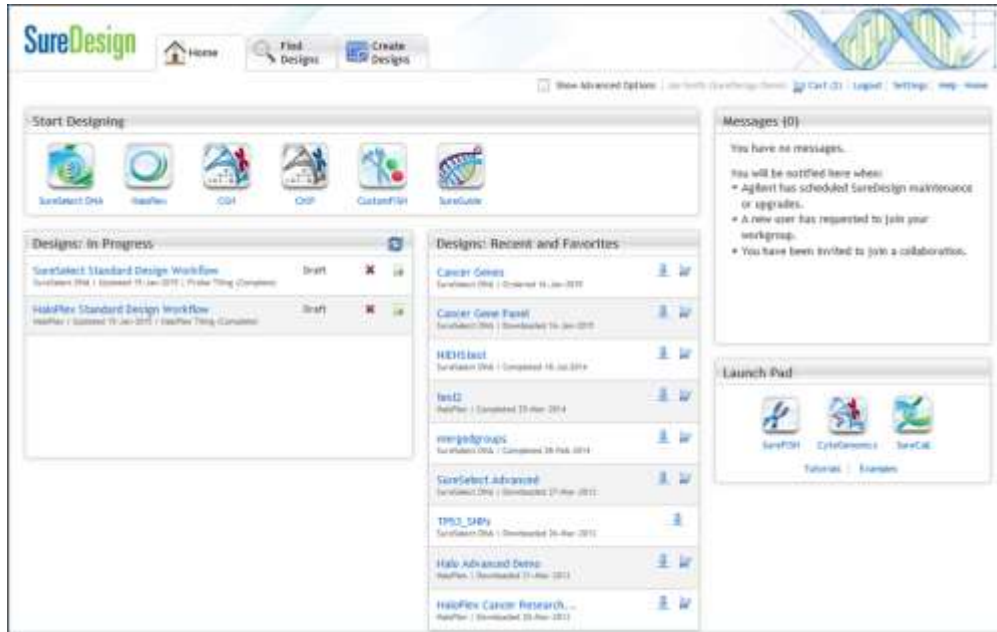
### Demonstration

- User Interface Tour
- Custom SureSelect Library Creation in SureDesign

### Getting Started with **SureDesign**

### Getting Support for **SureDesign**

# SureDesign Overview



Unmatched  
Custom Capability

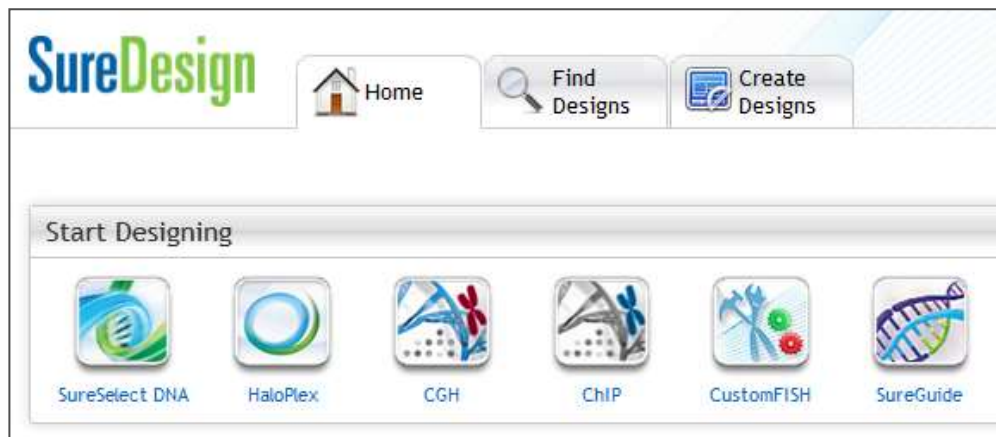
Intuitive Workflow

eCommerce  
Integration

# Unmatched Custom Capability

With **SureDesign**, Agilent's customers can customize **ANY** Agilent Genomics application...

No other design software approaches the breadth of customization capabilities offered in **SureDesign**.

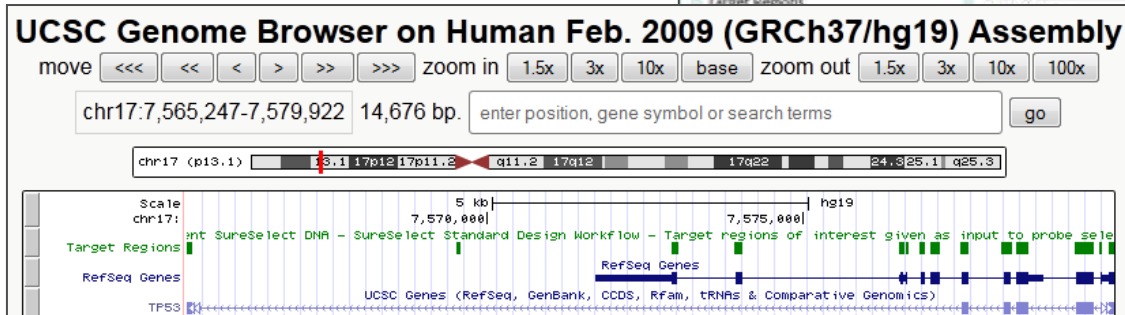
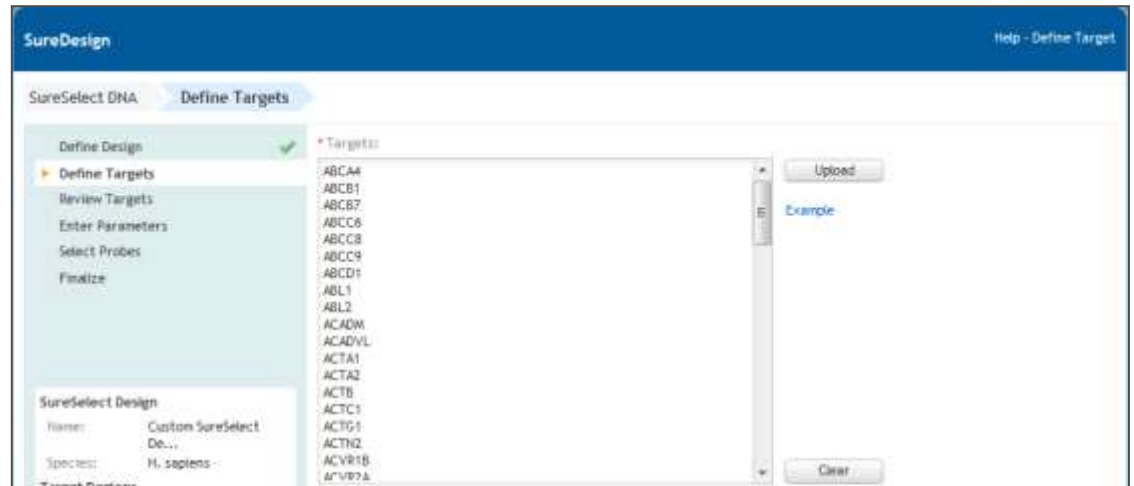


- *SureSelect*
- *HaloPlex*
- *CGH, CGH+SNP*
- *ChIP, LA*
- *CustomFISH*
- *SureGuide*
- *GE (in eArray)*
- *Mutagenesis (in eArray)*

# Intuitive Custom Design Workflows

**SureDesign** provides intuitive, guided custom design workflows for all applications.

- Step-by-step design guidance
- Standard and Advanced workflows
- UCSC integration for design review



# eCommerce Integration

## SureDesign Catalog Tab

- Agilent catalog design files and specifications

## eCommerce

- Easy request for quote
- Integrated Genomics Store shopping cart

Find Designs SureSelect.DNA Agilent Catalog Designs

Agilent Catalog My Designs Collaborations

1 - 13 of 13 items

Design ID	Name
S07084713	SureSelect Focused Exome
S0684402	SureSelect Inherited Disease
S06588914	SureSelect Hi-C Research Ex
S04380219	SureSelect Human All Exon V5-L
S04380110	SureSelect Human All Exon V5
S03770311	SureSelect Human Methyl-Seq
S03723424	SureSelect Human All Exon V4-LTRs
S03723314	SureSelect Human All Exon V4
S02972011	SureSelect Human All Exon 50Mb
S0293689	SureSelect Human All Exon V2
S0292632	SureSelect Human Kinase V1
S027613	
S027499	

Design ID: S0684402  
Name: SureSelect Inherited Disease  
Application: SureSelect DNA  
Species: H. sapiens  
# Probes: 299238  
Description: Developed in collaboration with researchers from Medical Genetics, Charite Berlin, this 10.5 Mb design is highly targeted to enable analysis of only those genes known to cause inherited disorders  
Creation Date: 17-Jul-2014  
Probe Size: 10.51 Mbp

PRODUCTS & SERVICES SOLUTIONS TECHNICAL SUPPORT LIBRARY TRAINING & EVENTS BUY

Home > Genomics > Cart

YOUR CART 1 BILLING & SHIPPING 2 REVIEW & PLACE ORDER 3 CHECK CONFIRMATION

You have 2 item/items in your cart.  
Items will remain in your shopping cart for 30 days. You can check out or continue shopping anytime during that period.

Request Quote | Renew Quote

SUBTOTAL of 2 item(s)  
**\$14,080.00**  
USD

START CHECK OUT >

SureDesign Help - Order

SureSelect DNA Order

Design Name: SureSelect Human All Exon...  
Design ID: S04380110  
\* Quantity: 1  
Sequencing Platform: HiSeq  
Reagent Kit: XT  
Automation Kit:   
Sample size: 16  
Design Part Number: 5190-6208  
Reagent Kit Part Number: G9611A

Workgroup Name: SureDesign Demo  
Company Name: Internal  
Company Number: 6000000

You are currently logged into SureDesign.  
SureDesign shares a shopping cart with the Agilent Genomics website. To purchase online, you also need to be registered with that site.  
To check-out, click the cart icon, and you will be transferred to the Agilent Genomics page. You must be logged in to see your discounted prices.

Add to Cart Request a Quote Cancel

# Custom SureDesign Library Creation in SureDesign

# Demonstration - **SureDesign** Quick Tour and Custom SureSelect Library Design

## **SureDesign** User Interface Tour

## SureSelect Standard Workflow

- Target definition
- Repeat Masking
- Probe Boosting

## SureSelect Price Tiers

## Design Report

## BED files



# SureSelect Target Definition

**SureDesign** Help - Tile Genes or Regions

SureSelect DNA (Probegroup) **Tile Genes or Regions**

Define Probegroup ✓  
Add Content ✓  
▶ **Tile Genes or Regions**  
Upload Probes  
Select Existing Probes  
Finalize

**SureSelect DNA Probegroup**  
Name: 160707\_SS\_Params  
Species: H. sapiens  
**Target Regions**  
# Regions: NA  
Size: NA

**\* Targets:**

```
# Enter gene IDs, gene symbols, or accessions.  
# SureDesign will map these identifiers to genomic locations  
# using the parameters below, then select probes from the  
# reference genome that match the locations.  
SMAD4  
NM_005359  
ENST00000342988  
CCDS11950  
4089  
  
# Enter UCSC browser or BED coordinates  
chr18:48573407-48573675  
chr18 48573406 48573675  
  
# Enter coordinates with identifiers  
chr18:48575655-48575704 MyGene1  
chr18:48577713 48577795 MyGene2 # exon 1  
chr18:48578994 48579032 MyGene2 # exon 2  
  
# Enter cytoband  
7p22.1
```

Upload  
Example  
Clear

**\* Databases**

- RefSeq
- Ensembl
- CCDS
- Gencode
- VEGA
- SNP
- CytoBand

**Regions of Interest**

- Coding Exons
- Coding Exons + UTRs  5' UTR  3' UTR
- Entire Transcribed Region

Include Flanking Bases:  
3': 10 bp 5': 10 bp

Allow Synonyms

Download

Cancel Back Next

# SureSelect Probe Design Parameters

The screenshot shows the SureDesign software interface. The top bar includes the 'SureDesign' logo and 'Help - Design Parameters'. The main navigation pane on the left shows a sequence of steps: 'Define Design' (checked), 'Define Targets' (checked), 'Review Targets' (checked), 'Enter Parameters' (active), 'Select Probes', and 'Finalize'. The 'Enter Parameters' section contains three dropdown menus: 'Density' set to '2x', 'Masking' set to 'Moderately Stringent', and 'Boosting' set to 'Balanced'. A 'Reset' button is located to the right of these dropdowns. At the bottom of the interface are 'Cancel', 'Back', and 'Begin Probe Selection' buttons.

**SureSelect DNA Design**

Name: GenePanel  
Species: H. sapiens (hg19)  
Category: SureSelect DNA

**Target Regions**

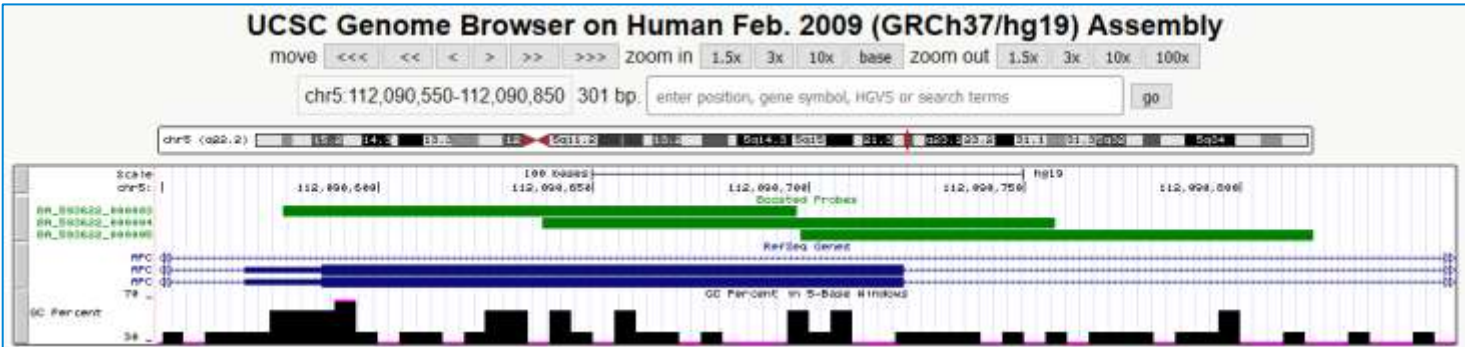
# Regions: 512  
Size: 103.789 kbp

**Probes**

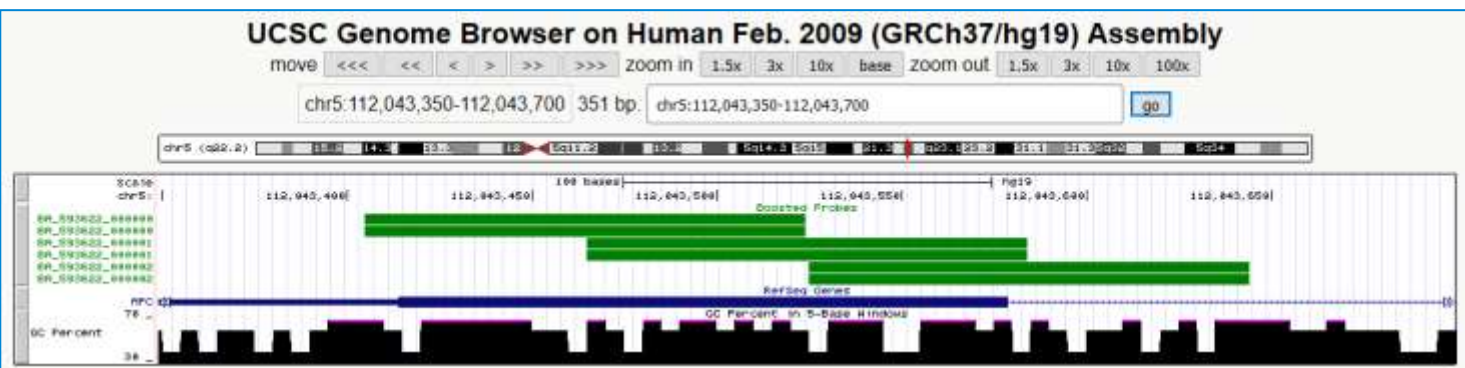
# Probes: NA  
Size: NA  
Price Tier: NA  
Coverage: NA

# Probe Boosting based on Local Percent GC

No boosting for regions with normal percent GC



2X boosting for regions with high percent GC



# Custom SureSelect Price Tiers

**SureSelect DNA Design**

Name:  
Species:  
Category:

**Probes**

# Probes:  
Size:  
Price Tier: ⓘ

**Price Tiers:**

- Tier 1: 1 - 499 kbp
- Tier 2: 0.5 - 2.999 Mbp
- Tier 3: 3.0 - 5.999 Mbp
- Tier 4: 6.0 - 11.999 Mbp (up to 115.4K probes)
- Tier 5: 12.0 - 24 Mbp (up to 230.6K probes)

For larger designs, please contact technical support.

*Note: Tier 1-3 must contain up to 57.7K probes.*

# Getting Started with SureDesign and eArray

# One User Account - Access to Both Systems

Register in either **SureDesign** or eArray...

*Get access to both systems!*

One Username and Password



# Registration and Login

## SureDesign

- <https://earray.chem.agilent.com/suredesign/index.htm>

## eArray

- <https://earray.chem.agilent.com/earray/>

Create your own workgroup or join your colleagues in an existing workgroup



# Getting SureDesign and eArray Support



# SureDesign and eArray Support

## Contact Agilent Informatics Software Support

- Hours of Operation
  - 8:30 PM to 5:30 PM Pacific Time
  - Sunday - Friday

- Email

[informatics\\_support@agilent.com](mailto:informatics_support@agilent.com)

- Phone (North America)  
800-227-9770 x 3 x 5 x 3

# SureDesign Features

With **SureDesign**, Agilent customers can

- **Design** custom microarrays, SureSelect libraries, or HaloPlex libraries
  - Also share custom designs with colleagues
- **Search** their own designs
- **Review** Agilent Catalog designs for purchase
- **Request quotations** for catalog and custom designs
- **Purchase** catalog and custom designs from the Agilent Genomics store