



Roche use only:

Internal Reference No.: _____

Key Account Manager Email: _____

Design Specification Form

SeqCap Epi Enrichment System

Complete this form in its entirety to ensure accurate processing of your order by Roche Sequencing Solutions (Roche). Note that a NimbleDesign account is now required before completing this form (see sequencing.roche.com/products/software/nimbledesign-software.html). If you are ordering multiple designs, complete one form for each design. If you have questions, contact Customer Service (refer to page 6 for contact details).

BACKGROUND INFORMATION

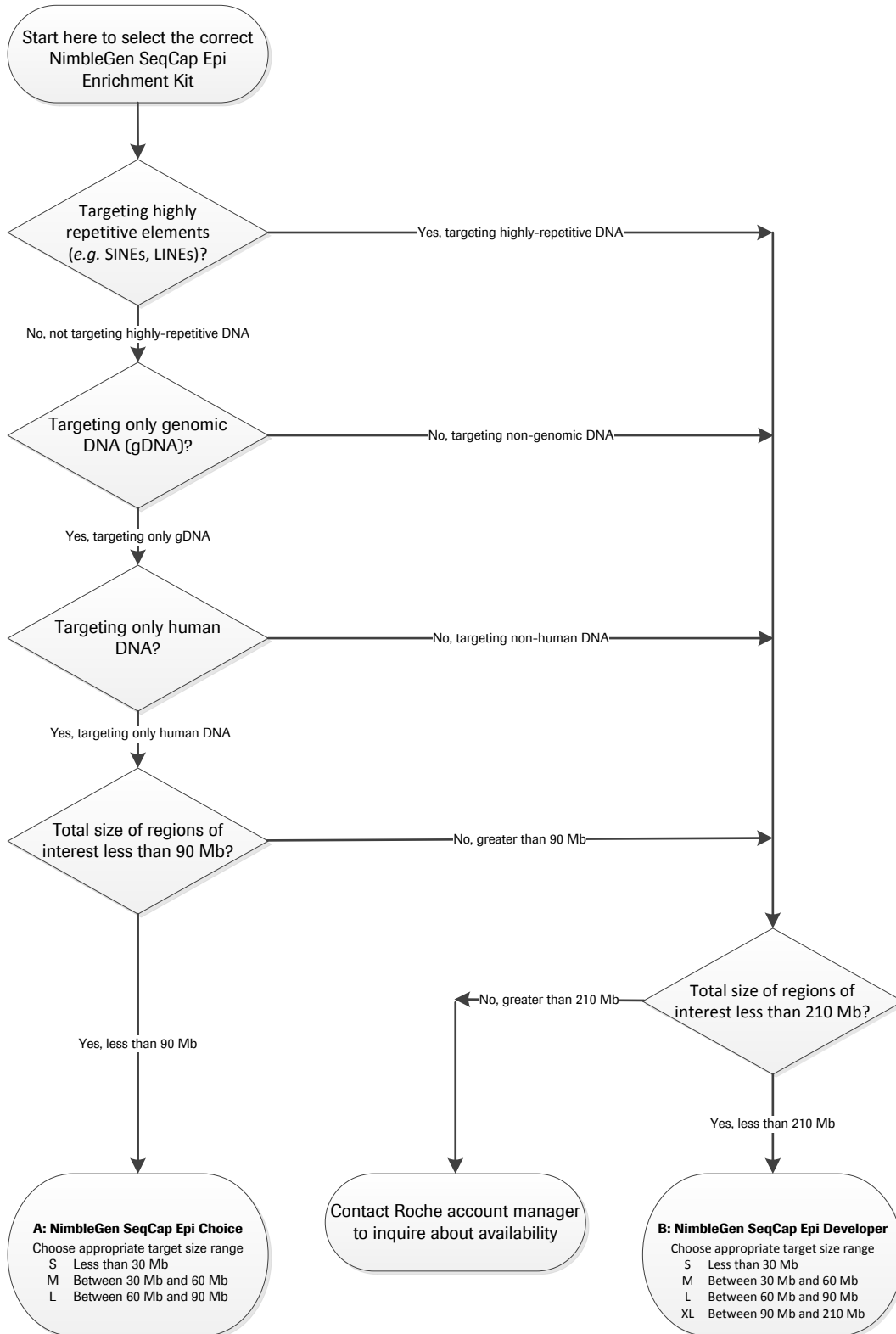
The SeqCap Epi Enrichment System enables solution-phase targeted enrichment of bisulfite-converted genomic DNA extracted from human or any other sequenced organism. The selected region(s) of interest can be contiguous (*e.g.* disease associated regions) or noncontiguous (*e.g.* promoter regions of a candidate gene panel). Based on regions selected by the customer, Roche will design capture probes using proprietary algorithms and send the design proposal to the customer for approval. After the design has been approved, Roche will produce the capture probes and ship the probes to the address on the Purchase Order.

The enrichment performance of bisulfite-converted DNA may be unpredictable due to variability among genomes and other properties intrinsic to the targeted region(s). Examples of such factors include: target sequence complexity (*e.g.* G/C content), repetitive element distribution (*e.g.* Alu, LINE, LTR), evolutionary history of the targeted region (*e.g.* conserved pseudogenes and gene family relationships), and population variation from the reference genome (*e.g.* CNV and hypervariable regions). When using a previously untested capture design, it is recommended to perform a small-scale experiment to determine the capture characteristics of a specific target before beginning a larger study.

SELECT ENRICHMENT PRODUCT(S)

Multiple SeqCap Epi Enrichment System products are available, which differ in target genome, the size of the custom regions, and/or the nature of the regions of interest. For custom designs, use the flowchart on the next page to select the appropriate product(s) for your experiment.

Enrichment Product Selection Flowchart



ENRICHMENT KIT INFORMATION

Specify the kit quantity.

You may combine two or more configurations if the number of reactions needed is not listed below. For example, you can order two 48-reaction kits and two 12-reaction kits to get a total of 120 reactions for your design.

A. If ordering SeqCap Epi Choice kits, please enter the quantity needed in the table below.

Enrichment Kit Name	Cat. No.	Quantity
SeqCap Epi Choice S Enrichment Kit, 12 Reactions	07138938001	
SeqCap Epi Choice S Enrichment Kit, 48 Reactions	07138946001	
SeqCap Epi Choice S Enrichment Kit, 384 Reactions	07138954001	
SeqCap Epi Choice M Enrichment Kit, 12 Reactions	07138962001	
SeqCap Epi Choice M Enrichment Kit, 48 Reactions	07138989001	
SeqCap Epi Choice M Enrichment Kit, 384 Reactions	07138997001	
SeqCap Epi Choice L Enrichment Kit, 12 Reactions	07139004001	
SeqCap Epi Choice L Enrichment Kit, 48 Reactions	07139012001	
SeqCap Epi Choice L Enrichment Kit, 384 Reactions	07139039001	

B. If ordering SeqCap Epi Developer kits, please enter the quantity needed in the table below.

Enrichment Kit Name	Cat. No.	Quantity
SeqCap Epi Developer S Enrichment Kit, 12 Reactions	07139071001	
SeqCap Epi Developer S Enrichment Kit, 48 Reactions	07139080001	
SeqCap Epi Developer S Enrichment Kit, 384 Reactions	07139098001	
SeqCap Epi Developer M Enrichment Kit, 12 Reactions	07139101001	
SeqCap Epi Developer M Enrichment Kit, 48 Reactions	07139128001	
SeqCap Epi Developer M Enrichment Kit, 384 Reactions	07139578001	
SeqCap Epi Developer L Enrichment Kit, 12 Reactions	07139586001	
SeqCap Epi Developer L Enrichment Kit, 48 Reactions	07139594001	
SeqCap Epi Developer L Enrichment Kit, 384 Reactions	07139608001	
SeqCap Epi Developer XL Enrichment Kit, 12 Reactions	07139624001	
SeqCap Epi Developer XL Enrichment Kit, 48 Reactions	07139659001	
SeqCap Epi Developer XL Enrichment Kit, 384 Reactions	07139667001	

DESIGN INFORMATION

1. **Please specify the taxonomic name and genomic build for your design.** Provide the genome build information and source for the build. Many genome builds can be found in the UCSC Genome database (genome.ucsc.edu) or ENSEMBL (www.ensembl.org). If the genome build is not available in either of these databases, provide a link to a publicly available source for the build. If your reference sequence is not publicly available, please provide a FASTA-formatted genome sequence when possible. This reference sequence will be used to screen out probes targeting repetitive elements of the genome in order to enhance capture efficiency.

Homo sapiens (HG19/GRCh37)

Homo sapiens (HG38/GRCh38)

Other: _____

Example: *Mus musculus* (mm10) from UCSC.

2. **Provide a brief description of the design:**

Description: _____

Example: design targeting transcripts from a cancer gene panel, version 3.

3. **Provide a design identifier (optional).** Roche can include a design identifier of up to 10 characters in the final design name. The provided design identifier will go after the build in the final design name.

Design Identifier: _____

Example: CancerV3 (final design name will be 130130_HG19_CancerV3_EPI).

4. **Submit (attach) the regions of interest in one of the following formats:**

Coordinates for the regions of interest. Coordinates must be supplied in tab-delimited BED format; (genome.ucsc.edu/FAQ/FAQformat.html#format1). Exact coordinates of each region are required.

FASTA formatted target sequences (if coordinates or identifiers cannot be obtained).



For small target regions of <100 bp in size, Roche extends the regions to 100 bp to increase capture efficiency.

5. **Specify the total size of your regions of interest using the information contained in the BED file and/or FASTA files created in step 4:**

Total size of regions of interest: _____

6. **Email the BED file and/or FASTA files and this form to Customer Service.**

(madison.customerservice@roche.com).

7. **Review and approve the design.** Roche will email probe coverage summaries for each design. Instructions for viewing and approving the design are provided along with these files. Approval of the design is required before processing of your order can continue. By approving the design, you represent to Roche that you have the right to submit the data to Roche for purposes of manufacture, and confirm that the design is according to your specifications.


CONTACT INFORMATION

Provide contact information for correspondence:

Product Design

Name: _____
 Company/Institution: _____
 Address 1: _____
 Address 2: _____
 City: _____ State: _____
 Zip/Postal Code: _____ Country: _____
 Telephone: _____
 NimbleDesign User ID: _____
 Email: _____

Delivery Address



Orders are delivered to the address listed on your Purchase Order. Contact your Purchasing Agent to ensure your delivery address is up to date.

ADDITIONAL INFORMATION

Include any additional information regarding your order:

CUSTOMER SERVICE

If you have questions about completing this form, contact Customer Service:

Email madison.customerservice@roche.com

TECHNICAL SUPPORT

If you have technical questions, contact your local Roche Technical Support. Go to sequencing.roche.com/support.html for contact information.

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