

Designing a Target capture kit

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What is target capture (for)?

- IDT[®], Inc. Target Capture: xGen[™] Lockdown[™] P.
- Instead of sequencing the whole genome
- only relevant portions are selected
 - exons of selected gene(s) only
 - or any part of the genome you want
 - only provide exact coordinates
 - or guidance what to select

e.g. a whole gene including introns:

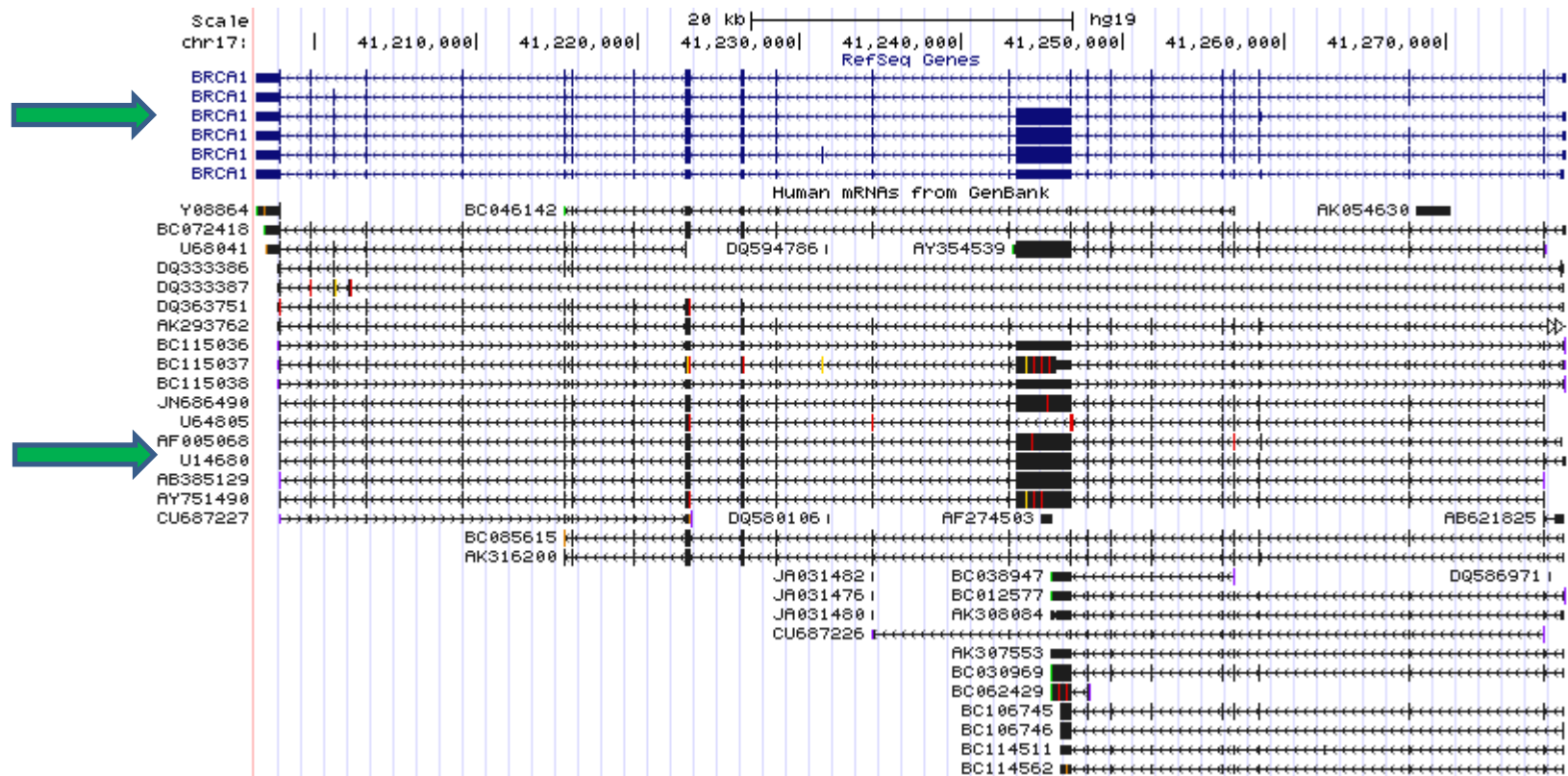
HMGCR/[NM_000859.2](https://www.ncbi.nlm.nih.gov/nuccore/NM_000859.2)/hg19:chr5:74,632,993-74,657,926

We provide full predesign service - example

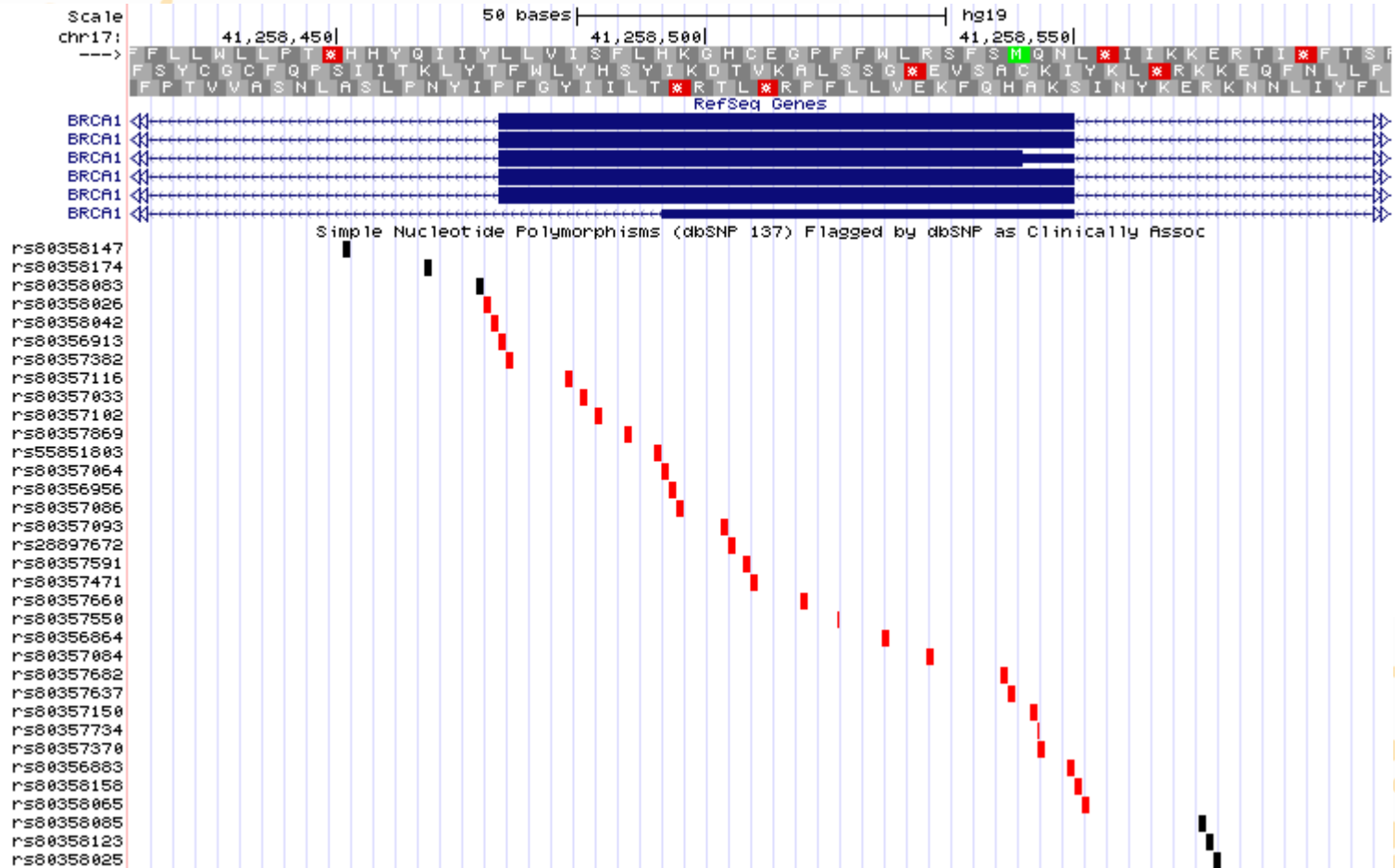
- give us the name of your gene: BRCA2
- goal: scan all mutations in exons of the gene
- 1st step: select the right reference sequence
 - provided by the customer or
 - literature analysis and
 - expert consultation

RefSeqs and mRNAs of BRCA1 gene

- Translate name of medically relevant reference sequence: **U14680**
- into the name of identical refseq for sequence extractors: **NM_007297**
- or even extend the coverage if you like



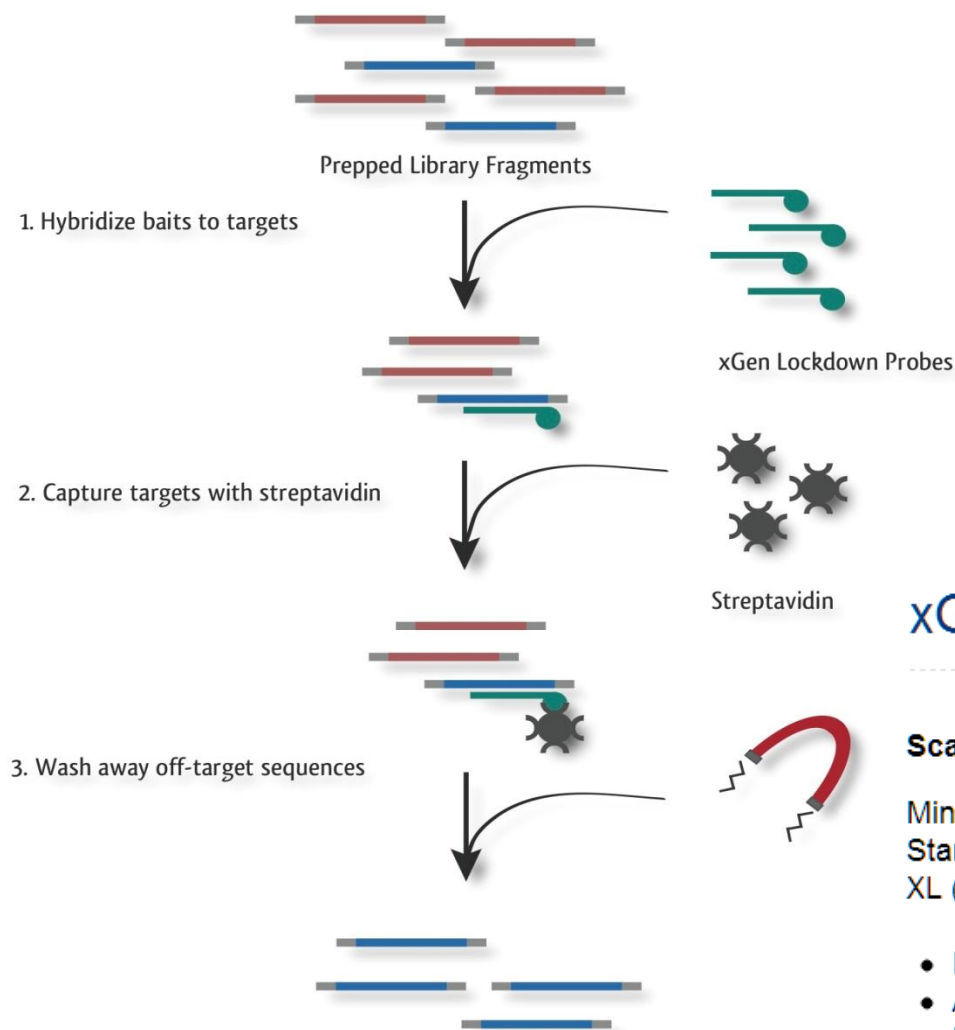
You only want to extract the exons



Functional groups of genes - example

- building complex functional target enrichment kits
- group of genes connected by common clinical significance
- target capture kit for 60+ genes with structural/associated functions in cytoskeleton, nucleoskeleton and extracellular matrix
- complete sequencing coverage of all exons of genes like LMNA, DMD, MYH7 etc. in one sequencing run
- mutational analysis of genes involved in multiple conditions:
 - cardiomyopathy, sudden death syndrome, aneurysms, lipodystrophy, muscle dystrophy, Charcot-Marie-Tooth, Alex. d. etc.

Wet-lab part: DIY or outsource to KRD as well



What do you get:

- pool of oligonucleotide probes in selected scale
- sequence of all probes

Contact:

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xGen™ Lockdown™ Probes *beta*

Scale (Yield/Probe)	Price per Probe	Minimum Order
Mini (2 pmole)	360,00 Kč CZK	200 probes
Standard (20 pmole)	720,00 Kč CZK	96 probes
XL (200 pmole)	1 080,00 Kč CZK	96 probes

- Probes are individually assessed by mass spectrometry for QC
- All probes contain a 5' biotin modification
- Maximum of 2000 probes per pool
- Probes are shipped in 7–10 days