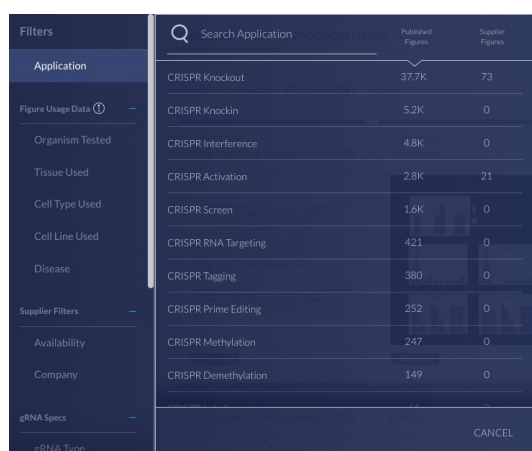


Choosing a CRISPR experiment

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The different CRISPR experiments include knockout, knockin, activation, interference, screen, methylation, and more

To help you survey the literature and product catalogs for CRISPR reagents, we've built off the most common CRISPR experiment types into our **Application** filter. When you set the **Product Type** filter to *CRISPR gRNA* or *CRISPR Cas Nuclease*, you'll be presented with a growing list of **Application** types. The most common among them are *CRISPR Knockout*, *CRISPR Activation*, *CRISPR Knockin*, *CRISPR Interference*, *CRISPR Screen*, *Tagging*, *Methylation*, *Demethylation*, and more.



Filters	Search Application	Published Figures	Supplier Figures
Application	CRISPR Knockout	37.7K	73
Figure Usage Data ⓘ	CRISPR Knockin	5.2K	0
Organism Tested	CRISPR Interference	4.8K	0
Tissue Used	CRISPR Activation	2.8K	21
Cell Type Used	CRISPR Screen	1.6K	0
Cell Line Used	CRISPR RNA Targeting	421	0
Disease	CRISPR Tagging	380	0
Supplier Filters	CRISPR Prime Editing	252	0
Availability	CRISPR Methylation	247	0
Company	CRISPR Demethylation	149	0
gRNA Specs			
gRNA Type			

CRISPR Knockout (CRISPR KO) - guide RNA (gRNA) disrupts the targeted gene by way of a Cas nuclease-mediated double-stranded break (or single-stranded nicks) that is erroneously repaired by non-homologous end joining (NHEJ).

CRISPR Knockin (CRISPR KI) - a gene targeted by gRNA is modified by adding sequences (e.g. disease SNPs) that will then be used as a template for repairing the double-stranded break (or single-stranded nicks) through the homology-directed repair (HDR) mechanism.

CRISPR Activation/Interference (CRISPRa/i) - A deactivated Cas nuclease (e.g. dCas9 or Cas9 null) is used for its precise targeting which enables gene activation in conjunction with fused transcriptional activators, or inhibition by sterically blocking transcription.

CRISPR Screen - Typically, a genetic loss-of-function experiment across an organism's whole genome coupled with selective pressure and then sequencing (e.g. next-generation sequencing). It's an approach for identifying novel protein functions.

CRISPR Tagging - CRISPR technology can be used to tag proteins that are expressed in their normal chromosomal context.

When you select more than one **application** simultaneously, we will return products (and figures that used those reagents!) that are indicated for or used for both types of experiments. Read more about some of the principles of [search logic for CRISPR reagents](#).

If there are CRISPR applications that are important to you that we're missing, [let us know](#) and we'd love to talk to

you about them.

Please check out our [**Guide to Filters for CRISPR Reagents**](#) to learn more about our filters!