

Resource Summary Report

Generated by [NIF](#) on Jul 31, 2026

CRISPRdirect

RRID:SCR_018186

Type: Tool

Proper Citation

CRISPRdirect (RRID:SCR_018186)

Resource Information

URL: <http://crispr.dbcls.jp/>

Proper Citation: CRISPRdirect (RRID:SCR_018186)

Description: Software for designing CRISPR/Cas guide RNA with reduced off target sites. Used for rational design of CRISPR/Cas target. Web server for selecting rational CRISPR/Cas targets from input sequence. Server currently incorporates genomic sequences of human, mouse, rat, marmoset, pig, chicken, frog, zebrafish, Ciona, fruit fly, silkworm, Caenorhabditis elegans, Arabidopsis, rice, Sorghum and budding yeast.

Resource Type: service resource, data access protocol, software resource, web service, production service resource, analysis service resource

Defining Citation: [PMID:25414360](#)

Keywords: CRISPR/Cas guide RNA, reduced off target site, design of CRISPR/Cas target, selecting rational target, sequence, genomic sequence, RNA, bio.tools

Funding: Japan Science and Technology Agency ;
Ministry of Education ;
Culture ;
Sports ;
Science and Technology of Japan

Availability: Free, Freely available

Resource Name: CRISPRdirect

Resource ID: SCR_018186

Alternate IDs: biotools:CRISPRdirect

Alternate URLs: <https://bio.tools/CRISPRdirect>

Record Creation Time: 20220129T080339+0000

Record Last Update: 20260731T043026+0000

Ratings and Alerts

No rating or validation information has been found for CRISPRdirect.

No alerts have been found for CRISPRdirect.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 452 mentions in open access literature.

Listed below are recent publications. The full list is available at [NIF](#) .

Wang L, et al. (2025) A receptor antagonist counterbalances multiple systemin phytocytokines in tomato. *Cell*.

Saitou H, et al. (2025) Characterization of a Novel Col1a1G643S/+ Osteogenesis Imperfecta Mouse Model with Insights into Skeletal Phenotype, Fragility, and Therapeutic Evaluations. *Calcified tissue international*, 116(1), 13.

Tsukamura A, et al. (2025) KNTC1 introduces segmental heterogeneity to mitochondria. *Disease models & mechanisms*, 18(3).

Lu X, et al. (2025) Metabolic engineering for sustainable xylitol production from diverse carbon sources in *Pichia pastoris*. *Microbial cell factories*, 24(1), 59.

Liyong Z, et al. (2025) BmMed6 modulates mating behavior by ORs and antennae structural genes in the silkworm. *iScience*, 28(4), 112017.

Nomura J, et al. (2025) ESC models of autism with copy-number variations reveal cell-type-specific translational vulnerability. *Cell genomics*, 5(6), 100877.

Leeke BJ, et al. (2025) Divergent DNA methylation dynamics in marsupial and eutherian embryos. *Nature*, 642(8069), 1073.

Lin HF, et al. (2025) Characterization of a SARS-CoV-2 infection model in golden hamsters with diabetes mellitus. *Virologica Sinica*, 40(3), 349.

Komaki R, et al. (2025) Necl-4/CADM4 regulates GABAergic synaptic strength on GABAergic inhibitory neurons via ErbB4 activation and prevents neuronal impairments. *Molecular neurobiology*, 62(12), 15943.

Chen D, et al. (2025) Dosage-dependent regulation of embryonic diapause by sorbitol dehydrogenase in the silkworm, *Bombyx mori*. *PLoS genetics*, 21(10), e1011933.

Watabe T, et al. (2025) Theranostics using ⁸⁹Zr/¹⁷⁷Lu-labeled antibody targeting erythropoietin-producing hepatocellular A2 (EphA2). *European journal of nuclear medicine and molecular imaging*, 52(8), 2887.

Zhu Z, et al. (2025) CRISPRi-mediated multigene downregulating redirects the metabolic flux to spinosad biosynthesis in *Saccharopolyspora spinosa*. *Synthetic and systems biotechnology*, 10(2), 583.

Yoro E, et al. (2025) The transcription factor PpRKD evokes female developmental fate in the sexual reproductive organs of *Physcomitrium patens*. *The New phytologist*, 245(2), 653.

Yong J, et al. (2025) Characterization of cis-polyisoprene produced in *Periploca sepium*, a novel promising alternative source of natural rubber. *Communications biology*, 8(1), 372.

Xiang G, et al. (2025) Ethylene increases the NaHCO₃ stress tolerance of grapevines partially via the VvERF1B-VvMYC2-VvPMA10 pathway. *Plant biotechnology journal*, 23(4), 1076.

Hou P, et al. (2025) Phenazine biosynthesis-like domain-containing protein (PBLD) and Cedrelone promote antiviral immune response by activating NF- κ B. *Nature communications*, 16(1), 496.

Motooka Y, et al. (2025) Heterozygous mutation in BRCA2 induces accelerated age-dependent decline in sperm quality with male subfertility in rats. *Scientific reports*, 15(1), 447.

Freitas-Alves NS, et al. (2025) CRISPR/Cas genome editing in soybean: challenges and new insights to overcome existing bottlenecks. *Journal of advanced research*, 73, 53.

Li Y, et al. (2025) Efficient production of 2'-fucosyllactose in *Pichia pastoris* through metabolic engineering and constructing an orthogonal energy supply system. *Synthetic and systems biotechnology*, 10(3), 807.

Chen K, et al. (2025) CRISPR-Cas9-based one-step multiplexed genome editing through optimizing guide RNA processing strategies in *Pichia pastoris*. *Synthetic and systems biotechnology*, 10(2), 484.