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Recombinant CRISPR Cas9 Protein, GMP-Grade

Catalog #GMP-CAS-EE110

Storage Condition -20°C ± 5°C for 24 months. Avoid repeated freeze/thaw cycles.
Form Liquid
Source *E. Coli* with CRISPR *Cas9* gene of *S. pyogenes*
Synonyms CRISPR-associated endonuclease Cas9/ Csn1, cas9, SpCas9, SpyCas9
Storage Buffer 30mM Tris-HCl, 0.3M NaCl, 50% Glycerol, 0.1 mM EDTA, pH 7.4
Concentration 9.5-12.5mg/mL. Exact concentration shown on product label.

Product Contents
- Recombinant Cas9 Protein, GMP-Grade

Product Description
Recombinant Streptococcus pyogenes Cas9 nuclease, purified from E.coli, is a powerful tool for genome editing. The nuclease can also be applied to the field of molecular diagnosis. This product has undergone codon optimization, nuclear localization signal (NLS) design, and optimization of E. coli expression and purification.

Applications
- Genome editing with CRISPR
- T-Cells, Stem Cells, etc.

Quality Control Statement
KACTUS manufactures this product according to GMP guidelines and performs stringent quality control testing before release. The production is antibiotic- and animal-free. Regulatory support documents are available. Please contact help@kactusbio.com for more information

Quality Control Release Criteria

Assay	Criteria
Purity (Bis-Tris)	≥ 95%
Purity (RP-HPLC)	≥ 95%
Purity (SEC-HPLC)	≥ 95%
Activity (*in vitro* cleavage)	> 85%
Endotoxin	≤ 10EU/mg
Residual DNase	≤ LOD
Residual RNase	≤ LOD
Residual Host Cell Protein	≤ 100ng/mL
Residual Host Cell DNA	≤ 200ng/mL
Sterility	Negative
Mycoplasma	Negative

Performance Validation
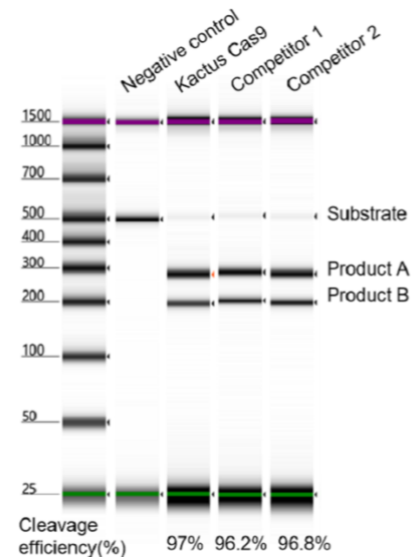
Cas9 cuts substrate DNA during *in vitro* cleavage reaction. Results show cleavage activity of KACTUS Cas9 is equivalent to that of leading competitors.
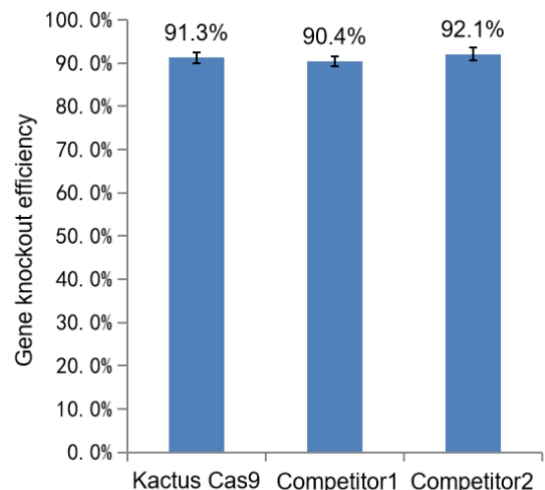
Cas9 is used for gene knockout in 293T cell line. Results show KACTUS Cas9 has the same knockout efficiency as leading competitors.