

## Product datasheet

# Recombinant *S. pyogenes* CRISPR-Cas9 protein ab204220

### Description

<b>Product name</b>	Recombinant <i>S. pyogenes</i> CRISPR-Cas9 protein
<b>Purity</b>	> 96 % SDS-PAGE. purified with two step column chromatography.
<b>Endotoxin level</b>	< 1.000 Eu/μg
<b>Expression system</b>	Escherichia coli
<b>Accession</b>	<a href="#">Q99ZW2</a>
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Streptococcus pyogenes
<b>Sequence</b>	<pre> MKHHHHHHQEFRSDKKYSIGLDIGTNSVGWAVITDEYKVP SKKFKVLGNT DRHSIKKNLIGALLFDSGETAEATRLKRTARRRYTRRKNRIC YLQEIFSN EMAKVDDSFHRLEESFLVEEDKKHERHPIFGNVDEVAY HEKYPTYHL RKKLDVSTDKADLRLMLALAHMIKFRGHFLIEGDLNPDNS DVKLFIQL VQTYNQLFEENPINASGVDAKAILSARLSKSRLENLIAQL PGEKKNGLF GNLIALSLGLTPNFKSNFDLAEDAKLQLSKDITYDDDLNLL AQIGDQYAD LFLAAKNLSDAILLSDILRVNTEITKAPLSASMIKRYDEHHQ DLTLLKAL VRQQLEPEKYKEIFFDQSKNGYAGYIDGGASQEEFYKFIKPIL EKMDGTEE LLVKLNREDLLRKQRTFDNGSIPHQIHLGELHAILRRQEDFY PFLKDNRE KIEKILTRIPYYVGPLARGNSRFAWMTRKSEETITPWNFEE VVDKGASA QSFIERMTNFDKNLPNEKVLPKHSLLEYFTVYNELTKVKY VTEGMRKPA FLSGEQKKAVIDLLFKTNRKVTVKQLKEDYFKKIECFDSVE </pre>

ISGVEDRFN  
 ASLGTYHDLLKIKDKDFLDNEENEDILEDMLTLTLFEDREM  
 IEERLKT  
 YAHLFDDKVMKQLKRRRYTGWGRLSRKLINGIRDKQSGKTI  
 LDFLKSDGF  
 ANRNFMQLIHDDSLTFKEDIQKAQVSGQGDSLHEHIANLA  
 GSPAIKKGIL  
 QTVKVVDELVKVMGRHKPENVIEMARENQTTQKGQKNS  
 RERMKRIEEGI  
 KELGSQILKEHPVENTQLQNEKLYLYLQNGRDMYVDQEL  
 DINRLSDYDV  
 DHV PQSFLKDDSIDNKVLTRSDKNRGKSDNVPSEEVVKK  
 MKNYWRQLLN  
 AKLITQRKFDNLTKAERGGLSELDKAGFIKRQLVETRQITK  
 HVAQILDSR  
 MNTKYDENDKLIREVKVITLKSCLVSDFRKDFQFYKVIN  
 NYHHAHDAY  
 LNAVVG TALIKKYPKLESEFVYGDYKVYDVRKMIKSEQEI  
 GKATAKYFF  
 YSNIMNFFKTEITLANGEIRKRPLIETNGETGENWWDKGRDF  
 ATVRKVLS  
 MPQVNIVKKTEVQTGGFSKESILPKRNSDKLIARKKDWDP  
 KKYGGFDSPT  
 VAYSVLVVAKVEKGKSKKLKSVKELLGITIMERSSEFEKNPI  
 DFLEAKGYK  
 EVKCDLIIKLPKYSLFELENGRKRMLASAGELQKGNELALP  
 SKYVNFLYL  
 ASHYEKLKGPEDNEQQLFVEQHKHYLDEIIEQISEFSKR  
 VILADANLD  
 KVLSAYNKHRDKPIREQAENIIHLFTLNLGAPAAFKYFDTTI  
 DRKRYTS  
 TKEVL DATLIHQSI TGLYETRIDLSQLGGDGLYETRIDLSQLG  
 GDSRADP KKKRKV Download Dahasheet

<b>Predicted molecular weight</b>	163 kDa including tags
<b>Amino acids</b>	2 to 1368
<b>Tags</b>	His tag N-Terminus
<b>Additional sequence information</b>	Full-length Streptococcus pyogenes serotype M1 CRISPR-Cas9 with N-terminal His tag and nuclei translocation signal (NTS) at C-terminal.

### Specifications

Our [Abpromise guarantee](#) covers the use of **ab204220** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	SDS-PAGE Functional Studies
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<b>Form</b>	Liquid
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### Preparation and Storage

## Stability and Storage

Shipped at 4°C. Store at -80°C. Avoid freeze / thaw cycle.

pH: 8.00

Constituents: 0.79% Tris HCl, 2.32% Sodium chloride, 20% Glycerol

## General Info

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### Relevance

[FUNCTION] CRISPR (clustered regularly interspaced short palindromic repeat) is an adaptive immune system that provides protection against mobile genetic elements (viruses, transposable elements and conjugative plasmids). CRISPR clusters contain spacers, sequences complementary to antecedent mobile elements, and target invading nucleic acids. CRISPR clusters are transcribed and processed into CRISPR RNA (crRNA) (Probable). In type II CRISPR systems correct processing of pre-crRNA requires a trans-encoded small RNA (tracrRNA), endogenous ribonuclease 3 (rnc) and this protein. The tracrRNA serves as a guide for ribonuclease 3-aided processing of pre-crRNA. Subsequently Cas9/crRNA/tracrRNA endonucleolytically cleaves linear or circular dsDNA target complementary to the spacer. The target strand not complementary to crRNA is first cut endonucleolytically, then trimmed by 3'-5' exonucleolytically. DNA-binding requires protein and both RNA species. Cas9 probably recognizes a short motif in the CRISPR repeat sequences (the PAM or protospacer adjacent motif) to help distinguish self versus nonself.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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