SMALL CAS9 PROTEIN INHIBITOR

Tech ID: 31752 / UC Case 2020-076-0

PATENT STATUS

<table>
<thead>
<tr>
<th>Country</th>
<th>Type</th>
<th>Number</th>
<th>Dated</th>
<th>Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patent Cooperation Treaty</td>
<td>Published Application</td>
<td>WO2021108442</td>
<td>06/03/2021</td>
<td>2020-076</td>
</tr>
</tbody>
</table>

Additional Patent Pending

BRIEF DESCRIPTION

A new protein that is able to inhibit the Cas9 protein from Streptococcus iniae (SinCas9). SinCas9 is capable of robust DNA cleavage and offers an immune orthogonal Cas9 for use in gene editing in human cells. The inhibitor is a small protein from a phage and is capable of inhibiting SinCas9 activity in vitro and in human cell genome editing experiments.

SUGGESTED USES

The newly discovered protein inhibitor could be used to prevent, limit, etc. gene editing from SinCas9. This may be relevant for biodefense use, limiting off-target editing, or other applications where reduced activity or rapid inhibition is desired.

ADVANTAGES

RELATED MATERIALS

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Methods and Compositions for Using Argonaute to Modify a Single-Stranded Target Nucleic Acid
- COMPOSITIONS AND METHODS FOR IDENTIFYING HOST CELL TARGET PROTEINS FOR TREATING RNA VIRUS INFECTIONS
- Cas9 Variants With Altered DNA Cleaving Activity
- Cas12-mediated DNA Detection Reporter Molecules
- Improved guide RNA and Protein Design for CasX-based Gene Editing Platform
- Cas13a/C2c2 - A Dual Function Programmable RNA Endonuclease
- Methods For High Signal-To-Noise Imaging Of Chromosomal Loci In Cells Using Fluorescent Cas9
- A Dual-RNA Guided Cas2 Gene Editing Technology
- MODULATORS OF TYPE VI-D CRISPR-CAS EFFECTOR POLYPEPTIDES AND METHODS OF USE THEREOF
- CRISPR-CAS EFFECTOR POLYPEPTIDES AND METHODS OF USE THEREOF ("Cas-VarPhI")
- A Protein Inhibitor Of Cas9
- Split-Cas9 For Regulatable Genome Engineering
- Decorating Chromatin for Precise Genome Editing Using CRISPR
- Optimized Virus-like Particles for Cas9 RNPs & Transgene/HDR Template Delivery
- CRISPR-CAS EFFECTOR POLYPEPTIDES AND METHODS OF USE THEREOF ("Cas-Theta")
- COMPOSITIONS AND METHODS FOR INCREASING HOMOLOGY-DIRECTED REPAIR
- CRISPR CASY COMPOSITIONS AND METHODS OF USE
- Single Conjugative Vector for Genome Editing by RNA-guided Transposition
- CRISPR-CAS EFFECTOR POLYPEPTIDES AND METHODS OF USE THEREOF ("Cas-Omega")
- Engineered/Variant Hyperactive CRISPR CasPn Enzymes And Methods Of Use Thereof
- Type V CRISPR/Cas Effector Proteins for Cleaving ssDNA and Detecting Target DNA
- THERMOSTABLE RNA-GUIDED ENDONUCLEASES AND METHODS OF USE THEREOF (GeoCas9)
- Structure-Guided Methods Of Cas9-Mediated Genome Engineering