A PROTEIN INHIBITOR OF CAS9

Tech ID: 29638 / UC Case 2019-008-0

PATENT STATUS

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<th>Type</th>
<th>Number</th>
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<td>Issued Patent</td>
<td>11,795,208</td>
<td>10/24/2023</td>
<td>2019-008</td>
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<td>Published Application</td>
<td>20210340199</td>
<td>11/04/2021</td>
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BRIEF DESCRIPTION

Clustered Regularly Interspaced Short Palindromic Repeat (CRISPR)/Cas9 nucleases, when complexed with a guide RNA, effect genome editing in a sequence-specific manner. RNA-guided Cas9 has proven to be a versatile tool for genome engineering in multiple cell types and organisms. There is a need in the art for additional compositions and methods for controlling genome editing activity of CRISPR/Cas9.

UC Berkeley researchers have discovered a new protein that is able to inhibit the Cas9 protein from Staphylococcus aureus (SauCas9). SauCas9 is smaller than the frequently used Cas9 from Streptococcus pyogenes, which has a number of benefits for delivery. The inhibitor is a small protein from a phage and is capable of strongly inhibiting gene editing in human cells.

SUGGESTED USES

» Gene editing

ADVANTAGES

» Limiting off-target editing, or other applications where reduced activity or rapid inhibition is desired

CONTACT

Terri Sale
terri.sale@berkeley.edu
tel: 510-643-4219.

INVENTORS

» Doudna, Jennifer A.

OTHER INFORMATION

CATEGORIZED AS

» Materials & Chemicals
» Biological
» Medical
» Gene Therapy
» Research Tools
» Nucleic Acids/DNA/RNA

RELATED CASES

2019-008-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

► COMPOSITIONS AND METHODS FOR IDENTIFYING HOST CELL TARGET PROTEINS FOR TREATING RNA VIRUS INFECTIONS
► Genome Editing via LNP-Based Delivery of Efficient and Stable CRISPR-Cas Editors
► Type III CRISPR-Cas System for Robust RNA Knockdown and Imaging in Eukaryotes
► 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 Endoribonuclease
► RNA-directed Cleavage and Modification of DNA using CasY (CRISPR-CasY)
► CasX Nickase Designs, Tans Cleavage Designs & Structure
► In Vivo Gene Editing Of Tau Locus Via Liponanoparticle Delivery