PROTEIN INHIBITOR OF TYPE II-A CRISPR-CAS SYSTEM

Tech ID: 32335 / UC Case 2021-133-0

PATENT STATUS

Patent Pending

BRIEF DESCRIPTION

The inventors have discovered three protein inhibitors of the type II-A CRISPR-Cas system that specifically inhibit Cas9 from staphylococcus aureus. This finding is of potential importance to many companies in the CRISPR space.

SUGGESTED USES

This technology can be used for developing technologies using Anti-CRISPRs.

The technology will enable safe and precise use of CRISPR-Cas9 from staphylococcus aureus.

The invention can also be used for engineering genetic circuits in mammalian cells.

ADVANTAGES

Anti-CRISPRs are biomolecules that inhibit nucleic-acid targeting and/or cleavage by CRISPR-Cas systems. By controlling the CRISPR system, one could possibly ameliorate the toxicity and off-target cleavage activity. Moreover, these proteins can also serve as an antidote for instances where the use of CRISPR-Cas technology poses a safety risk.

RELATED MATERIALS

CRISPR, staphylococcus aureus, s. aureus

CATEGORIZED AS

» Agriculture & Animal Science
  » Animal Science
  » Other
  » Biotechnology
    » Genomics
    » Other
  » Environment
    » Other
  » Imaging
    » Medical
    » Other
  » Medical
    » Imaging
    » Other
  » Research Tools
  » Other
  » Security and Defense
    » Other
  » Engineering
    » Other

RELATED CASES

2021-133-0

CONTACT

Terri Sale
terri.sale@berkeley.edu
tel: View Phone Number.
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
- Lentivirus-like Particle Delivery of CRISPR-Cas9 & Guide RNA for Gene Editing
- 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
- Miniature Type VI CRISPR-Cas Systems and Methods of Use
- CasX Nickase Designs, Tans Cleavage Designs & Structure
- A Dual-RNA Guided CasZ Gene Editing Technology
- CRISPR/Cas EFFECTOR POLYPEPTIDES AND METHODS OF USE THEREOF ("Cas-VarPhi")
- Modifications To Cas9 For Passive-Delivery Into Cells
- A Protein Inhibitor Of Cas9
- Split-Cas9 For Regulatable Genome Engineering
- NANOPORE MEMBRANE DEVICE AND METHODS OF USE THEREOF
- Optimized Virus-like Particles for Cas9 RNPs & Transgene HDR Template Delivery
- Protein Inhibitor of Type VI-B CRISPR-Cas System
- 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
- Improved Cas12a Proteins for Accurate and Efficient Genome Editing
- CRISPR-CAS EFFECTOR POLYPEPTIDES AND METHODS OF USE THEREOF
- Engineered/Variant Hyperactive CRISPR CasPn Enzymes And Methods Of Use Thereof
- Engineering Cas12a Genome Editors with Minimized Trans-Activity
- Methods Of Use Of Cas12L/CasLambda In Plants
- 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
- Endoribonucleases For Rna Detection And Analysis
- Efficient Site-Specific Integration Of New Genetic Information Into Human Cells
- Class 2 CRISPR/Cas COMPOSITIONS AND METHODS OF USE
- Compositions and Methods of Use for Variant Csy4 Endoribonucleases
- Identification Of Sites For Internal Insertions Into Cas9
- Chimeric Cas9 Variants With Novel Engineered Enzymatic Activities
- Small Molecule Assisted Cell Penetrating Cas9 RNP Delivery
- Methods and Compositions for Controlling Gene Expression by RNA Processing