PROTEIN INHIBITOR OF TYPE VI-B CRISPR-CAS SYSTEM

Tech ID: 32275 / UC Case 2021-101-0

PATENT STATUS
Patent Pending

BRIEF DESCRIPTION
The inventors have discovered the first protein inhibitor of the type VI-B CRISPR-Cas system. By controlling this CRISPR system, one could possibly ameliorate the toxicity and off-target cleavage activity observed with the use of the type VI CRISPR system. Moreover, these proteins can also serve as an antidote for instances where the use of CRISPR-Cas technology poses a safety risk. Additionally, this technology can also be used for engineering genetic circuits in mammalian cells. This finding is of potential importance to many companies in the CRISPR space.

SUGGESTED USES
This technology will enable safe and precise use of CRISPR-Cas type VI-B. The invention can also be used for engineering gene circuits in mammalian cells.

ADVANTAGES
Many Anti-CRISPRs have been discovered for multiple DNA-targeting systems but none have been discovered for the RNA-targeting type VI-B CRISPR system that is widely being used for biotechnological applications in research, healthcare, agriculture, and vector control.

Anti-CRISPRs are biomolecules that inhibit nucleic-acid targeting and/or cleavage by CRISPR-Cas systems.

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OTHER INFORMATION
KEYWORDS
CRISPR

CATEGORIZED AS
Agriculture & Animal Science
Animal Science
Other
Biotechnology
Genomics
Environment
Other
Imaging
Medical
Other
Medical
Imaging
Other
Research Tools
Research Tools
Other
Security and Defense
Other

RELATED CASES
2021-101-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS
- 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
- Type III CRISPR-Cas System for Robust RNA Knockdown and Imaging in Eukaryotes