

# ENGINEERED ACE2 RECEPTOR TRAPS TO BLOCK SARS-COV-2 INFECTION

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## INVENTION NOVELTY

Researchers at UCSF and the Chan Zuckerberg Biohub have developed a set of ACE2 variants which potently block SAR-CoV-2 infection in cells.

## VALUE PROPOSITION

- ▶ Receptor traps neutralize SARS-CoV-2 as effectively as high-affinity antibodies isolated from convalescent patients
- ▶ ACE2 receptor traps have large binding interfaces and block the entire receptor binding interface, limiting the potential impact of viral escape mutations
- ▶ Receptor traps can be predesigned for viruses with known entry receptors

## TECHNOLOGY DESCRIPTION

SARS-CoV-2 is the strain of coronavirus that causes COVID-19. This virus is characterized by spike proteins on its surface, which mediate infection by binding to host cell receptor protein angiotensin-converting enzyme II (ACE2). To date, few antiviral therapeutic agents have demonstrated clinical efficacy in treating COVID-19. Therefore, there is an urgent need for additional pharmaceutical agents to treat COVID-19.

## APPLICATION

- ▶ SARS-CoV-2 antiviral therapeutic

## STAGE OF DEVELOPMENT

Research – *in vitro*

## RELATED MATERIALS

- ▶ [Engineered ACE2 receptor traps potently neutralize SARS-CoV-2 - 10/22/2020](#)

## PATENT STATUS

Patent Pending

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### OTHER INFORMATION

#### KEYWORDS

Affinity reagent,  
Biomolecules, yeast particle  
display

#### CATEGORIZED AS

- ▶ **Medical**
  - ▶ Disease: Infectious Diseases
  - ▶ Therapeutics

#### RELATED CASES

2020-251-0

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