MULTISPAN
Assay Experts in GPCRs and Beyond

MULTISCREEN^{TM} STABLE CELL LINE
HUMAN RECOMBINANT ACE2 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C2006

Lot Number: C2006

Quantity: 1 vial (2 x 10^6) frozen cells

Freeze Medium: Cellbanker 2 (Amsbio 11891)

Host cell: HEK293T

Transfection: Expression vector containing full-length human ACE2 cDNA (GenBank Accession Number: NM_021804.1) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM, 10% FBS, 250 ug/mL hygromycin

Stability: In Progress

Background: Angiotensin converting enzyme (ACE2) receptors locate in the human oral pharynx and upper airway where the high replication rate of Corona virus happens more easily. ACE2 has been confirmed as the cause of SARS-CoV-2 internalization in concert with TMPRSS2 (transmembrane protease serin 2). TMPRSS2 facilitates ACEs cell entry by priming the spike S protein of the virus. Therapeutic strategies that focus on the biology of ACE2 and TMPRSS2 may become beneficial for the treatment of lung disease.

Application: Functional assays

Figure 1

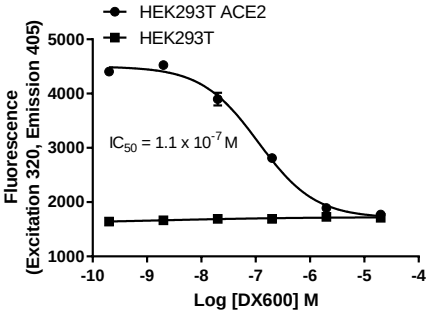

Figure 2

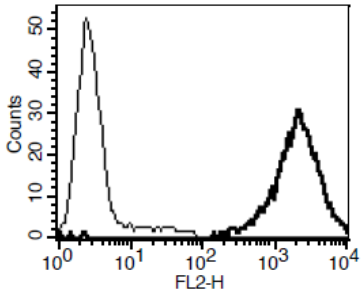

Figure 1. Dose-dependent inhibition of protease activity, measured with fluorogenic peptide substrate specific to ACE2 **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using anti-Flag antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Liu *et al.* (2020) The science underlying COVID-19, Implications for the Cardiovascular System. *Circulation.* 2020;142:68–78. DOI: 10.1161/CIRCULATIONAHA.120.047549

Hoffmann *et al.* (2020) SARS-CoV-2 Cell Entry Depends on ACE2 and TMPRSS2 is Blocked by a Clinically Proven Protease Inhibitor. *Cell* 181, 271–280, April 16, 2020

Zhang, et al. Angiotensin- converting enzyme 2 (ACE2) as a SARS- CoV-2 receptor: molecular mechanisms and potential therapeutic target. (2020). Intensive Care Med., 46, 586–5905.

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