

Active Angiotensin I Converting Enzyme 2 (ACE2) Instruction Manual

SBPB278Hu61

Homo sapiens (Human)

Buffer Formulation	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Traits	Freeze-dried powder
Purity	> 95%
Isoelectric Point	5.1
Applications	Cell culture; Activity Assays.

ACTIVITY TEST

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QST IEEQAKTFLD KFNHEAEDLF YQSSLASWNY
NTNITEENVQ NMNAGDKWS AFLKEQSTLA QMYPLQEIQN LTVKLQLQAL
QQNGSSVLSE DSKRRLNTIL NTMSTIYSTG KVCNPDNPQE CLLLEPGLNE
IMANSLDYNE RLWAWESWRS EVGKQLRPLY EEYVVLKNEM ARANHYEDYG
DYWRGDYEVN GVDGYDYSRG QLIEDVEHTF EEIKPLYEHL HAYVRAKLMN
AYPSYISPIG CLPAHLLGDM WGRFWTNLYS LTVPFGQKPN IDVTDAMVDQ
AWDAQRFKE AEKFFVSVGL PNMTQGFWEN SMLTDPGNVQ KAVCHPTAWD
LGKGDFRILM CTKVTMDDFL TAHHEMGHIQ YDMAYAAQPF LLRNGANEGF
HEAVGEIMSL SAATPKHLKS IGLLSPDFQE DNETEINFLL KQALTIVGTL
PFTYMLEKWR WMVFKGEIPK DQWMKKWEM KREIVGVVEP VPHDETYCDP
ASLFHVSNDY SFIRYYRTL YQFQFQEALC QAAKHEGPLH KCDISNSTEA
GQKLFNMLRL GKSEPWTAL ENVVGAKNMN VRPLLNYFEP LFTWLKDQNK
NSFVGWSTDW SPYADQSIKV RISLKSALGD KAYEWNDEM YLFRSSVAYA
MRQYFLKVKV QMILFGEDV RVANLKPRIS FNFFVTAPKN VSDIIPRTEV
EKAIRMSRSR INDAFRLNDN SLEFLGIQPT LGPPNQPPVS
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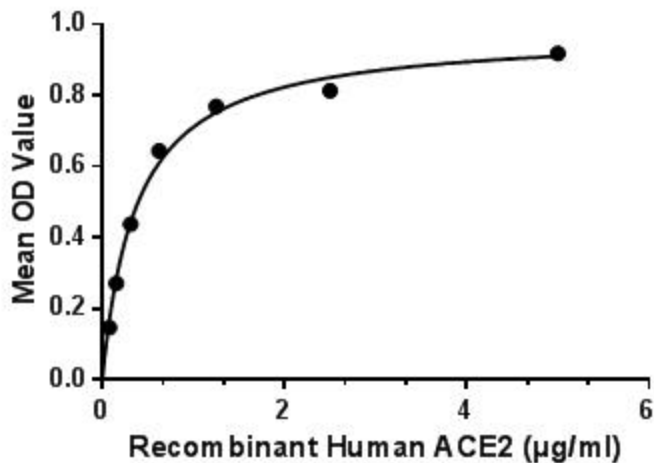


Figure 1. The binding activity of ACE2 with RBD⁺

Angiotensin-converting enzyme 2 (ACE2), as a transmembrane protein, serves as the main entry point into cells for some coronaviruses, including HCoV-NL63, SARS-CoV, and SARS-CoV-2. More specifically, the binding of the spike S1 protein of SARS-CoV and SARS-CoV-2 to the enzymatic domain of ACE2 on the surface of cells results in endocytosis and translocation of both the virus and the enzyme into endosomes located within cells. Besides, recent studies show that spike (S) proteins of 2019-nCoV and SARS-CoV may use the same host cell receptor called angiotensin-converting enzyme 2 (ACE2) for entering into host cells, thus a binding ELISA assay was conducted to detect the interaction of recombinant human ACE2 and recombinant Spike glycoprotein RBD. Briefly, biotin-linked ACE2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µl were then transferred to RBD-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST 3 times and incubation with HRP conjugate for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µl stop solution to the wells and read at 450nm immediately. The binding activity of ACE2 and RBD was shown in Figure 1, and this effect was in a dose dependent manner.

USAGE

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

STORAGE

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

STABILITY

The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

Image

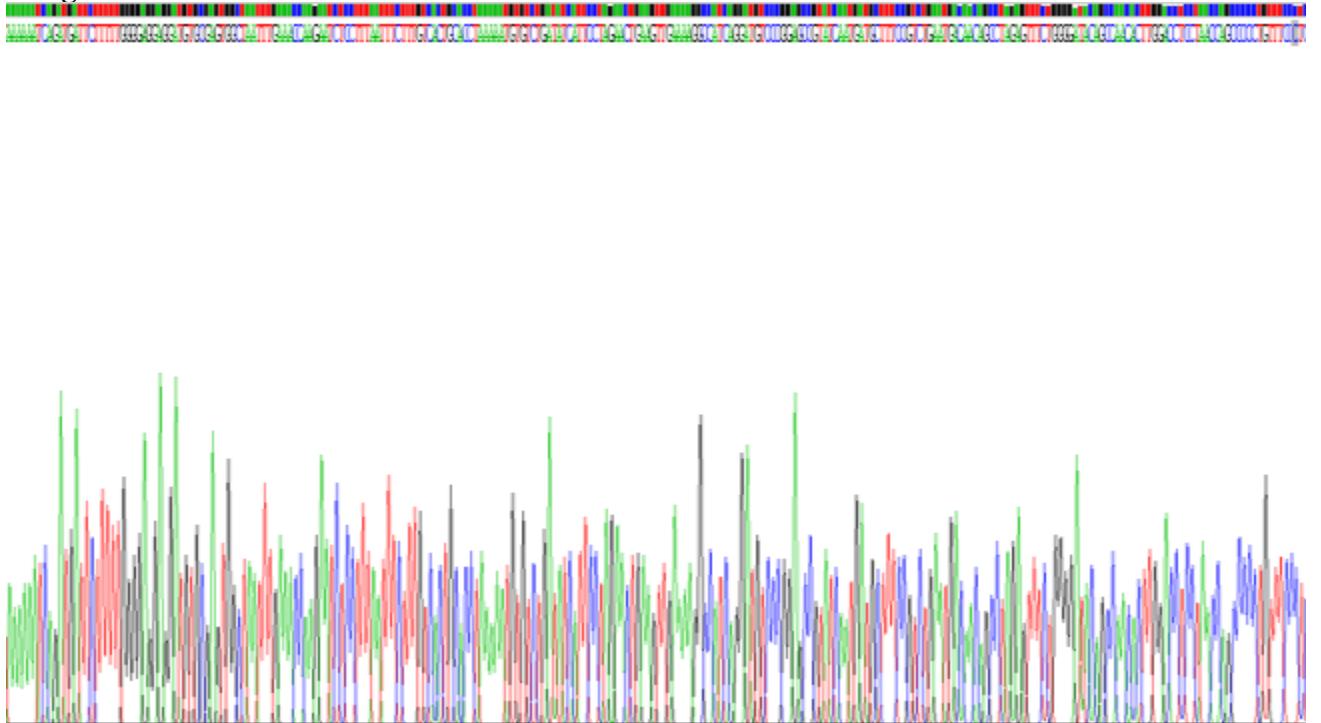
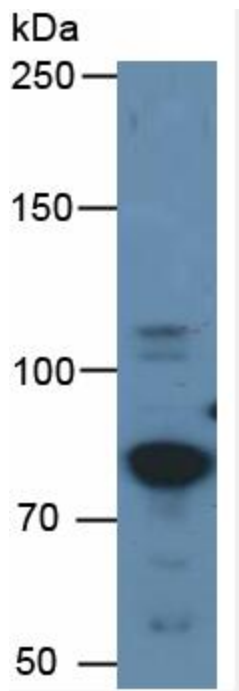


Figure. SDS-PAGE



WB Image

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.