

ACE2/VERO Cell Line

ACE2/VERO Stable Cell Line

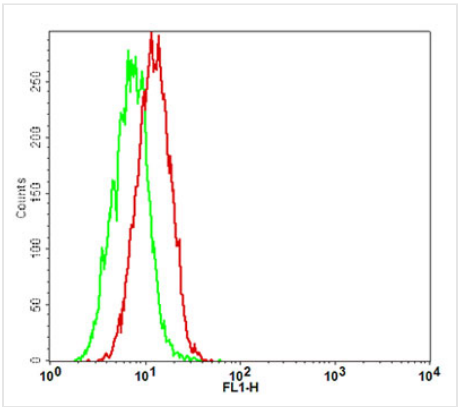
CATALOG # AAA78551	APPLICATIONS Functional Assay
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PRODUCT SYNONYMS

ACE2/VERO; ACE2/VERO Stable Cell Line; ACE2/VERO cell line

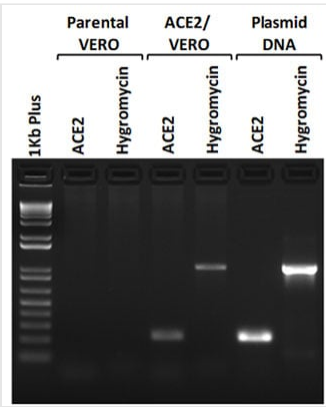
PRODUCT SPECIFICATIONS

Form/Format	Each vial contains 2~3 x 10 ⁶ cells in 1ml of 90% FBS + 10% DMSO
Sequence	MSSSSWLLLS LVAVTAAQST IEEQAKTFLD KFNHEAEDLF YQSSLASWNY NTNITEENVQ NMNAGDKWS AFLKEQSTLA QMYPLQEIQN LTVKLQLQAL QQNGSSVLSE DKSKRLNTIL NTMSTIYSTG KVCNPDNPQE CLLLEPGLNE IMANSLDYNE RLWAWESWRS EVGKQLRPLY EEYVVLKNEM ARANHYEDYG DYWRGDYEVN GVDGYDYSRG QLIEDVEHTF EEIKPLYEHL HAYVRAKLMN AYPYSISPIG CLPAHLLGDM WGRFWTNLYS LTVPGQKPN IDVTAMVDQ AWDARIFKE AEKFFVSVGL PNMTQGFVEN SMLTDPGNVQ KAVCHPTAWD LGKGDFRILM CTKVTMDDFL TAHHEMGHIQ YDMAYAAQPF LLRNGANEGF HEAVGEIMSL SAATPKHLKS IGLLSPDFQE DNETEINFL KQALTIVGTL PFTYMLEKWR WMVFKGEIPK DQWMKKWVEM KREIVGVVEP VPHDETYCDP ASLFHVSNDY SFIRYYTRTL YQFQFQEALC QAAKHEGPLH KCDISNSTEA GQKLFNMLRL GKSEPWTAL ENVVGAKNMN VRLLNYFEP LFTWLKDQNK NSFVGWSTDW SPYADQSIK RISLKSALGD KAYEWNENEM YLFRSSVAYA MRQYFLKVKQ QMILFGEEDV RVANLKPRIS FNFFVTAPKN VSDIIPRTEV EKAIRMSRSR INDARLNDN SLEFLGIQPT LGPPNQPPVS IWLIVFGVVM GVIVVGIVIL IFTGIRDKK KNKARSGENP YASIDISKGE NNPGFQNTDD VQTSF
Applicable Applications for ACE2/VERO cell line	FA (Functional Assay)
Culture Conditions	Cells should be grown at 37 degree C with 5% CO₂ using DMEM medium (w/ L-Glutamine, 4.5g/L Glucose and Sodium Pyruvate) supplemented with 10% heat-inactivated FBS supplemented with 10% FBS and 1% Pen/Strep, plus 250ug/ml of Hygromycin. It is recommended to quickly thaw the frozen cells upon receipt or from liquid nitrogen in a 37 degree C water-bath, transfer to a tube containing 10 ml of growth medium without Hygromycin, spin down cells, resuspend cells in pre-warmed growth medium without Hygromycin, transfer resuspended cells to T25 flask and culture in 37 degree C-CO₂ incubator. Leave the T25 flask in the incubator for 1~2 days without disturbing or changing the medium until cells completely recover viability and become adherent. Once cells are over 90% adherent, remove growth medium and passage the cells through trypsinization and centrifugation. At first passage, switch to growth medium containing Hygromycin. Cells should be split before they reach complete confluence. To passage the cells, detach cells from culture vessel with Trypsin/EDTA, add complete growth medium and transfer to a tube, spin down cells, resuspend cells and seed appropriate aliquots of cells suspension into new culture vessels. Subcultivation ration = 1:10 to 1:20 weekly. To achieve satisfactory results, cells should not be passaged over 16 times.
Notes	The ACE2 Stable cell line is available in three cell line formats: ACE2/CHO-K1 , ACE2/HEK293 , ACE2/VERO
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Immediately upon receipt, store in liquid nitrogen. Dry Ice Shipment: Extra charge fee may add to your shipping cost as dry ice is required to ship this product. Shipping Note: Product is available for shipment in the United States, Canada and European countries. Please inquire for shipment to other countries.



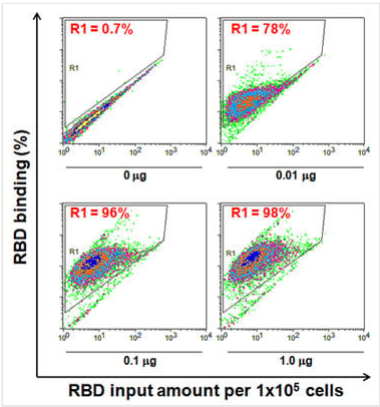
Application Data

Fig-5: Cell Surface staining of human ACE2 in the ACE2/VERO stable cell line. ATTO 488-conjugated anti-hACE2 antibody (clone AC18F) was used at 1ug/ 1x10⁶ cells (Red). ATTO 488-conjugated mouse IgG1 was used as isotype control at 1ug/ 1x10⁶ cells (Green).



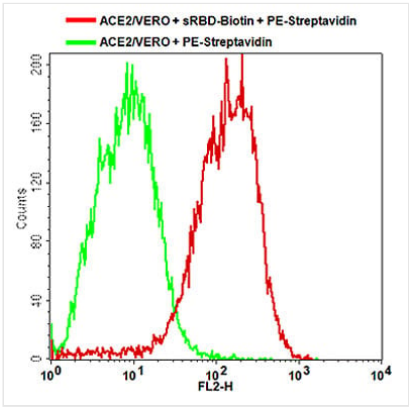
Application Data

Fig-4: Genomic PCR analysis. Genomic DNAs were purified from ACE2/VERO stable cells and parental Vero E6 cells, and used as the PCR templates. PCR was performed using the target gene construct-specific primer sets, and the plasmid DNA of target gene construct was used as positive control.



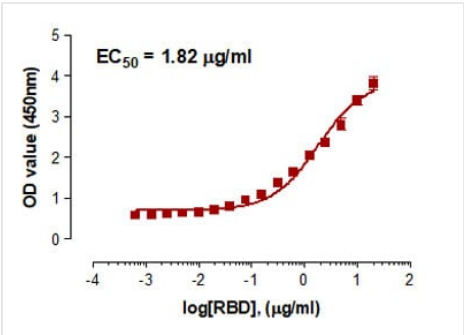
Application Data

Fig-3: Binding of biotinylated SARS-Cov-2 Spike RBD protein to human ACE2 in the ACE2/VERO stable cell line. ACE2/VERO cells were probed with different amounts of biotinylated SARS-Cov-2 Spike RBD protein and analyzed by flow cytometry through fluorescent-labeled Streptavidin detection.



Application Data

Fig-2: Detection of ACE2 expression in ACE2/VERO cells by flow cytometry. ACE2/VERO cells were probed with biotinylated SARS-Cov-2 Spike RBD protein at 1 x 10⁵ cells per 1 ug protein on ice for 2 hours. Cells were washed with flow buffer and then incubated with PE-labeled Streptavidin on ice for 20 min. Cell were washed and then analyzed by flow cytometry.



Application Data

Fig-1: Binding of biotinylated SARS-Cov-2 Spike RBD protein to human ACE2 in the ACE2/VERO stable cell line. ACE2/VERO cells were probed with different amounts of biotinylated SARS-Cov-2 Spike RBD protein and analyzed through In-Cell ELISA using HRP-Streptavidin for detection.

ADDITIONAL INFORMATION

Related Product Information for ACE2/VERO cell line	ACE2/VERO Stable Cell Line is a stably transfected Vero E6 cell line which expresses human angiotensin-converting enzyme 2 (ACE2). ACE2 is a type I transmembrane metalloenzyme located on the outer surface of endothelial cells in the lung, arteries, heart, kidney and intestines. ACE2 cleaves the carboxyl-terminal amino acid phenylalanine from angiotensin II and hydrolyses it into the vasodilator angiotensin. ACE2 also serves as an entry receptor for some coronaviruses including HCoV-NL63, SARS-CoV and SARS-CoV-2 as the virus that causes COVID-19.
Product Categories/Family for ACE2/VERO cell line	Cell Lines; Stable Cell Lines

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/cell-line/ace2-vero/78551>