

Product Sheet

H_ACE2 HEK-293T Cell Line

Catalog number: GM-C12968

Version 3.3.1.260213

Description	H_ACE2 HEK-293T Cell Line is a clonal stable HEK-293T cell line that constitutively expresses the human ACE2 gene, constructed using lentiviral technology.
Quantity	5E6 Cells per vial, 1 mL
Product Format	1 vial of frozen cells
Shipping	Shipped on dry ice
Storage Conditions	Liquid nitrogen immediately upon receipt
Target	Human_ACE2
Gene ID/Uniprot ID	Q9BYF1-1
Host Cell	HEK-293T
Recovery Medium	DMEM+10% FBS+1% P.S
Growth medium	DMEM+10% FBS+1% P.S+0.75 µg/mL Puromycin
Note	None
Freezing Medium	90% FBS+10% DMSO
Growth properties	Adherent
Growth Conditions	37°C, 5% CO ₂
Mycoplasma Testing	The cell line has been screened to confirm the absence of Mycoplasma species.
Safety considerations	Biosafety Level 2
Note	It is recommended to expand the cell culture and store a minimum of 10 vials at an early passage for potential future use.

Materials

Reagent	Manufacturer/Catalogue No.
DMEM	Gibco/C11995500BT
Fetal Bovine Serum	ExCell/FSP500
Pen/Strep	Thermo/15140-122
Puromycin	Genomeditech/GM-040401
Anti-ACE2 hIgG4 Antibody(3E8)	Genomeditech/GM-32019AB

Figures

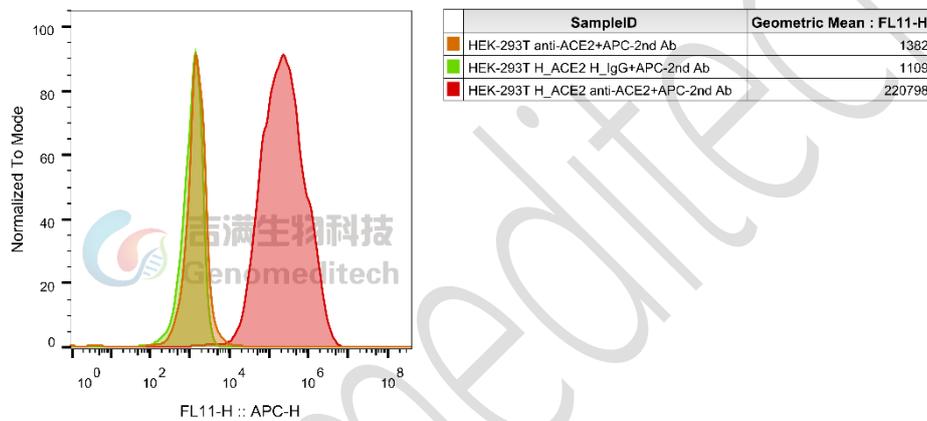
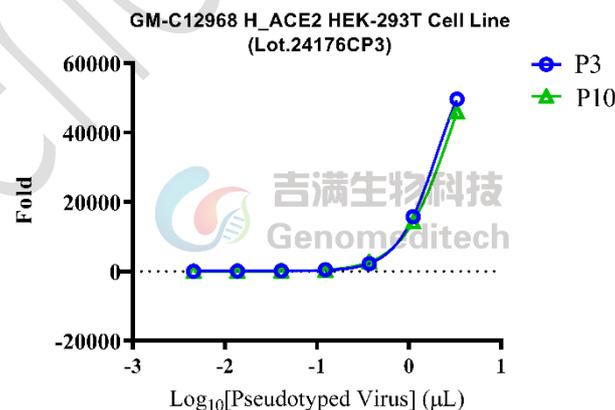


Figure 1 | H_ACE2 HEK-293T Cell Line (Cat. GM-C12968) was determined by flow cytometry using Anti-ACE2 hIgG4 Antibody(3E8) (Cat. [GM-32019AB](#)).



H_ACE2 HEK-293T Cell Line (GM-C12968/24176CP3) at lower cell passage number (e.g., p=3) and higher passage cells (e.g., p=10) were infected by different amounts of SARS-CoV-2 Spike Pseudotyped Virus(GM-0220PV07/VF27999), respectively.

Figure 2 | H_ACE2 HEK-293T Cell Line (GM-C12968/24176CP3) at lower cell passage number (e.g., p=3) and higher passage cells (e.g., p=10) were infected by different amounts of SARS-CoV-2 Spike Pseudotyped Virus(GM-0220PV07/VF27999), respectively.

Cell Recovery

Recovery Medium: DMEM+10% FBS+1% P.S

To insure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C . Storage at -70°C will result in loss of viability.

- a) Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 - 3 minutes).
- b) Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
- c) Transfer the vial contents to a centrifuge tube containing 5.0 mL complete culture medium and spin at approximately $176 \times g$ for 5 minutes. Discard supernatant.
- d) Resuspend cell pellet with the recommended recovery medium. And dispense into appropriate culture dishes.
- e) Incubate the culture at 37°C in a suitable incubator. A 5% CO_2 in air atmosphere is recommended if using the medium described on this product sheet.

Cell Freezing

Freezing Medium: 90% FBS+10% DMSO

- a) Centrifuge at $176 \times g$ for 3 minutes to collect cells.
- b) Resuspend the cells in pre-cooled freezing medium and adjust the cell density to 5×10^6 cells/mL.
- c) Aliquot 1 mL into each vial.
- d) Place the vial in a controlled-rate freezing container and store at -80°C for at least 1 day, then transfer to liquid nitrogen as soon as possible.

Cell passage

Growth medium: DMEM+10% FBS+1% P.S+0.75 $\mu\text{g}/\text{mL}$ Puromycin

For the first 1 to 2 passages post-resuscitation, use the recovery medium. Once the cells have stabilized, switch to a growth medium.

- a) Remove and discard culture medium.
- b) Briefly rinse the cell layer with PBS to remove all traces of serum that contains trypsin inhibitor.
- c) Add 1.0 mL of 0.25% (w/v) Trypsin-EDTA solution to dish and observe cells under an inverted microscope until cell layer is dispersed (usually within 30 to 60 seconds at 37°C).
- d) Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal.
- e) Add 2.0 mL of growth medium to mix well and aspirate cells by gently pipetting.
- f) After centrifugation, resuspend the pellet and add appropriate aliquots of the cell suspension to new culture vessels.

g) Incubate cultures at 37°C.

Subcultivation Ratio: A subcultivation ratio of 1:5 - 1:8 is recommended

Medium Renewal: Every 1 to 2 days

Notes

a) Upon initial thawing, a higher number of dead cells is observed, which is a normal phenomenon. Significant improvement is seen after adaptation. Once the cells reach a stable state, the number of dead cells decreases after subculturing and the cell growth rate becomes stable.

Sequence

ACE2 Q9BYF1-1

MSSSSWLLLSLVAVTAQAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMNNAAGDKWSA
 FLKEQSTLAQMYPLQEIQNLTVKQLQALQONGSSVLSSEKSKRLNLTILNTMSTIYSTGKVCNPDNPQECLLL
 EPGLEIMANSLDYNERLWAWESWRSEVVGKQLRPLYEEYVVLKNEMARANHYEDYGDYWRGDYEVNGV
 DGYDYSRGLIEDVEHTFEEIKPLYEHLHAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVP
 FGQKPNIDVTDAMVDQAWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGK
 GDFRILMCTKVTMDDFLTAHHEMIGHIQYDMA YAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLL
 SPDFQEDNETEINFLLKQALTIVGTLPTTYMLEKWRWMVFKGEIPKQDQWMKKWEMKREIVGVVEPVPHD
 ETYCDPASLFHVSNDYSFIRYYTRTL YQFQFQEAALCQAAKHEGPHLKC DISNSTEAGQKLFNMLRLGKSEPW
 TLALENVVGAKNMNVRPLLNYFEPLFTWLKQNKNSFVGVSTWSPYADQSIKVRISLKSALGDKAYEWN
 DNEMYLFRRSSVAYAMRQYFLKVKNQMLFGEDVRVANLKRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRS
 RINDAFRLNDNSLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVGIVILIFTGIRDRKKKKNKARSGENPYASI
 DISKGENNPGFQNTDDVQTSF*

Related Products

SARS-COV-2	
Anti-ACE2 hIgG4 Antibody(3E8)	Anti-SARS-CoV-2 hIgG1 Antibody (Imdevimab)
Influenza B-NP Pseudovirus Standards	
SARS-CoV-2 abEN 假病毒(SARS-CoV-2 abEN pseudovirus)	SARS-CoV-2 Spike Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(B.1.1.529)Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(B.1.1.7/VUI-202012/01,delta145Y) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(B.1.258,B.1.141/B1.258/N439K)Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(B.1.351/501Y.V2) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(B.1.427+B.1.429)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(B.1.429 CAL.20C)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(B.1.525)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(B.1.617)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(B.1.617.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(B.1.617.2)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(B.1.617.3)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(B.1.621)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(B.1.640.2)Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(B.1.7/VUI-202012/01,delta144Y/145Y) Pseudotyped Virus (GFP-Luciferase)

SARS-COV-2 Spike(B1.1.298/Y453F)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BA.1.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BA.2)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 spike(BA.2.12.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BA.2.3.20)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BA.2.75)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BA.2.76)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BA.2.86.1) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BA.2.86.2) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BA.2.86.3) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BA.2.9)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BA.3)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BA.4)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BA.5)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BF.7)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BF.7.14)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BN.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BN.1.2)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BN.1.3)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BQ.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BQ.1.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(CH.1.1)Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(D614G) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(D614G+A831V) Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(D614G+A879S) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(D614G+D936Y) Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(D614G+I472V) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(D614G+L5F) Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(D839Y) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(Delta+)Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(E484K) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(E484K+N501Y) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(EG.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(EG.5)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(EG.5.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(FL.1.5.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(HF.1)Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(HK.3) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(HV.1)Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 spike(JN.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(JN.1.1) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(JN.1.11.1) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(JN.1.13) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(JN.1.16) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(JN.1.16.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(JN.1.4) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(JN.1.7) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(JN.2) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(JN.3) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(JQ.1) Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(K417N) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(K417N+E484K+N501Y) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(K417T+E484K+N501Y)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(KP.1.1) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(KP.2) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(KP.3) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(KP.4.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(L452Q) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(L452R+E484Q)Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(L5F) Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(L8V) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(L8W) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(Lambda)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(Lambda;del1247-253)Pseudotyped Virus (GFP-Luciferase)

SARS-COV-2 Spike(LB.1) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(N354D) Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(N501Y) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(N501Y+D614G) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(P.1 501Y.V3)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(P.2)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(Q493R) Pseudotype Virus(GFP-T2A-Luciferase)	SARS-CoV-2 Spike(R408I) Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(V367F) Pseudotyped Virus (GFP-Luciferase)	SARS-CoV-2 Spike(V483A) Pseudotyped Virus (GFP-Luciferase)
SARS-CoV-2 Spike(W436R) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XAY)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XBB)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XBB.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XBB.1.16)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XBB.1.16.6)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XBB.1.22) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XBB.1.5)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XBB.1.5.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XBB.1.6)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XBB.1.9 .1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XBB.1.9)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XBB.2.3)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XBC)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XDV)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(BA.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(BA.3.2)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(JN.1.18.5) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(KP.1.1.3)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(KP.2.3)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(KP.3.1.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(KS.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(KW.1.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(LB.1.3.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(LF.3.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(LF.7) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(LF.7.2.1) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(LP.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(LP.8.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(LP.8.1.1) Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(MC.1)Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(MC.10.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(NB.1) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(NB.1.8.1)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XDV.1) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XEC)Pseudotyped Virus (GFP-Luciferase)
SARS-COV-2 Spike(XEC.4) Pseudotyped Virus (GFP-Luciferase)	SARS-COV-2 Spike(XFG) Pseudotyped Virus (GFP-Luciferase)
Monkeypox Virus-B6R Pseudovirus Standards	Monkeypox Virus-F3L Pseudovirus Standards

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