

# Product Sheet

## H\_CTLA4 PD-1 CHO-K1 Cell Line (High Ratio)

Catalog number: GM-C39703

Version 3.3.1.260623

<b>Description</b>	H_CTLA4 PD-1 CHO-K1 Cell Line (High Ratio) is a clonal stable CHO-K1 cell line that constitutively expresses the human CTLA4 and PD-1 genes, constructed using lentiviral technology.
<b>Quantity</b>	5E6 Cells per vial, 1 mL
<b>Product Format</b>	1 vial of frozen cells
<b>Shipping</b>	Shipped on dry ice
<b>Storage Conditions</b>	Liquid nitrogen immediately upon receipt
<b>Target</b>	Human_CTLA4 & Human_PD-1
<b>Gene ID/Uniprot ID</b>	P16410 & Q15116
<b>Host Cell</b>	CHO-K1
<b>Recovery Medium</b>	F12K+10% FBS+1% P.S
<b>Growth medium</b>	F12K+10% FBS+1% P.S+4 µg/mL Blasticidin+4 µg/mL Puromycin
<b>Note</b>	None
<b>Freezing Medium</b>	90% FBS+10% DMSO
<b>Growth properties</b>	Adherent
<b>Growth Conditions</b>	37°C, 5% CO <sub>2</sub>
<b>Mycoplasma Testing</b>	The cell line has been screened to confirm the absence of Mycoplasma species.
<b>Safety considerations</b>	Biosafety Level 2
<b>Note</b>	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.
F12K	BOSTER/PYG0036
Fetal Bovine Serum	ExCell/FSP500
Pen/Strep	Thermo/15140-122
Blasticidin	Genomeditech/GM-040404
Puromycin	Genomeditech/GM-040401
Anti-H_CTLA-4 hIgG1 Antibody(Ipilimumab)	Genomeditech/GM-27203AB
Anti-PD1 hIgG4 Reference Antibody (Pembio)	Genomeditech/GM-87802MAB
PE Rabbit anti-Human CD152/CTLA-4 mAb	Abclonal/A23713
PE Rabbit anti-Human/Monkey PD-1/CD279 mAb	Abclonal/A25730
BD Quantibrite™ PE Phycoerythrin Fluorescence Quantitation Kit	BD Biosciences/340495

## Figures

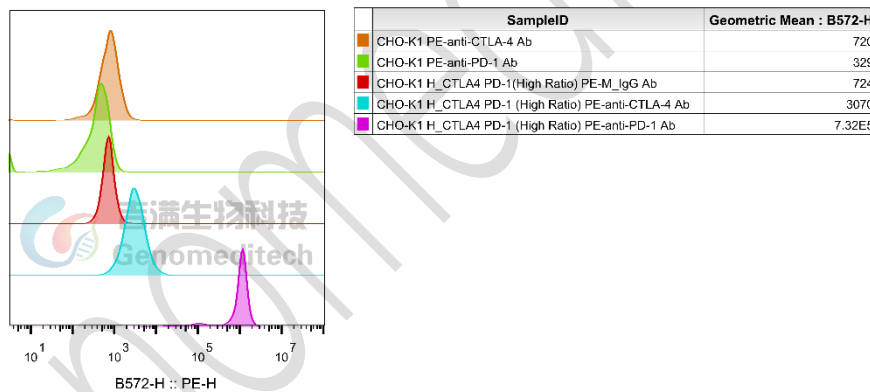


Figure 1 | H\_CTLA4 PD-1 CHO-K1 Cell Line (High Ratio) (Cat. GM-C39703) was determined by flow cytometry using PE Rabbit anti-Human CD152/CTLA-4 mAb (Abclonal/A23713) and PE Rabbit anti-Human/Monkey PD-1/CD279 mAb (Abclonal/A25730).

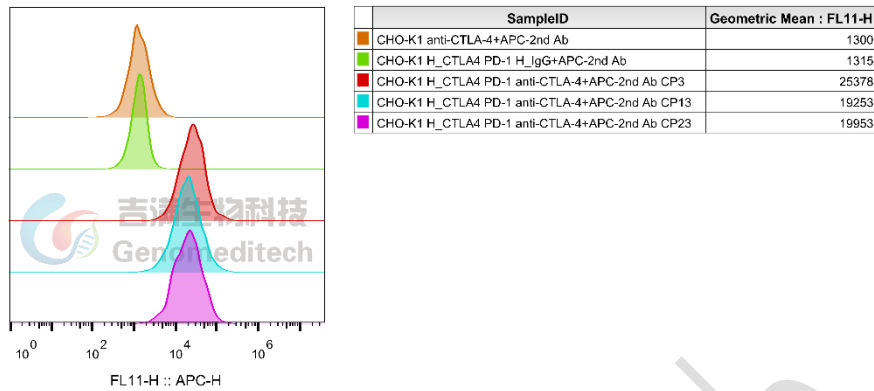


Figure 2 | The passage stability of the H\_CTLA4 PD-1 CHO-K1 Cell Line (High Ratio) (Cat. GM-C39703) was determined by flow cytometry using Anti-H\_CTLA-4 hlgG1 Antibody(Ipilimumab) (Cat. [GM-27203AB](#)).

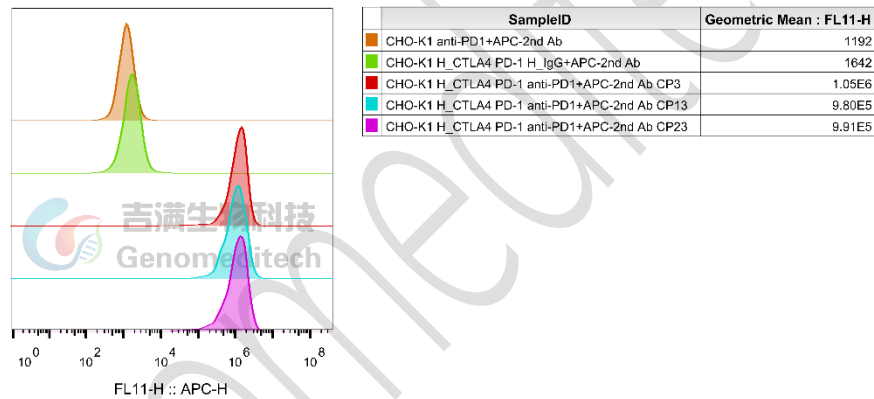


Figure 3 | The passage stability of the H\_CTLA4 PD-1 CHO-K1 Cell Line (High Ratio) (Cat. GM-C39703) was determined by flow cytometry using Anti-PD1 hlgG4 Reference Antibody (Pembio) (Cat. [GM-87802MAB](#)).

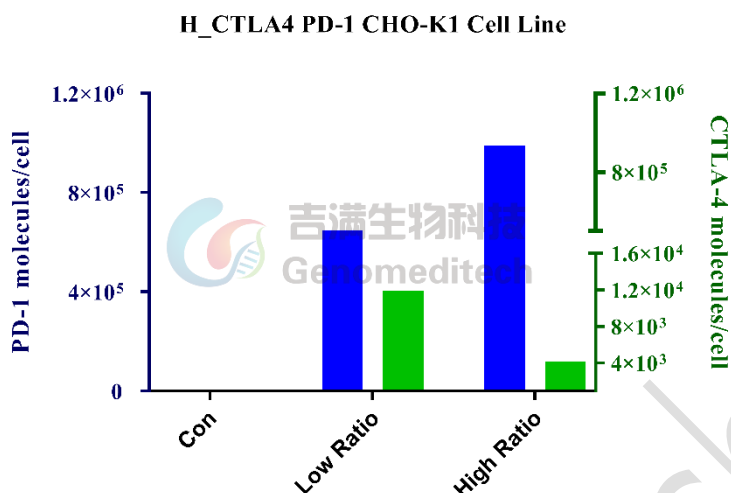


Figure 4 | Surface expression of PD-1 and CTLA-4 on H\_CTLA4 PD-1 CHO-K1 Cell Line (High Ratio) (Cat. GM-C39703) and H\_CTLA4 PD-1 CHO-K1 Cell Line (Low Ratio) (Cat. GM-C44345) were quantified using the BD Quantibrite™ PE Phycoerythrin Fluorescence Quantitation Kit (BD Biosciences/340495). The bar graph illustrates the Molecules of Equivalent Soluble Fluorochrome Per Cell (MESF) values, demonstrating distinct surface receptor densities for PD-1 (blue) and CTLA-4 (green) in the High and Low Ratio cells compared to the parental CHO-K1 control cells.

## Cell Recovery

Recovery Medium: F12K+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.

- 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).
- 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.
- Transfer the vial contents to a centrifuge tube containing 5.0 mL complete culture medium and spin at approximately 176 x g for 5 minutes. Discard supernatant.
- Resuspend cell pellet with the recommended recovery medium. And dispense into appropriate culture dishes.
- Incubate the culture at 37°C in a suitable incubator. A 5% CO<sub>2</sub> in air atmosphere is recommended if using the medium described on this product sheet.

## Cell Freezing

Freezing Medium: 90% FBS+10% DMSO

- Centrifuge at 176 x g for 3 minutes to collect cells.

- b) Resuspend the cells in pre-cooled freezing medium and adjust the cell density to 5E6 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: F12K+10% FBS+1% P.S+4 µg/mL Blasticidin+4 µg/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 2 to 3 minutes 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 1:4 - 1:5 is recommended**

**Medium Renewal: Every 2 to 3 days**

## Notes

- a) After the stabilization of the cell condition, there will be fewer dead cells post-passage, the cell growth rate will tend to stabilize, cell morphology will become uniform, and the cells will appear robust.

## Sequence

CTLA4 [P16410](#)

MACLGFQRHKAQLNLA TRTW PCTLLFFLLFIPV FCKAMHVAQPA VVLASSRGIASFVCEYASPGKATEVRVT  
VLRQADSQVTEVCAATYMMGNELTFLDDSICTGTSSGNQVNLTIQGLRAMDTGLYICKVELMYPPPYLIGIG  
NGTQIYVIDPEPCPDSDFLLWILAAVSSGLFFYSFLLTAVSLSKMLKKRSPLTTGVYVKMPPEPECEKQFQPY  
FIPIN\*

PDCD1(PD-1) [Q15116](#)

MQIPQAPWPVVWAVLQLGWRPGWFLDSPDRPWNPTFSPALLVVTEGDNATFTCSFSNTSESVLNWYRMS  
PSNQTDKLAAPEDRSQPGQDCRFRTQLPNGRDFHMSVVRARRNDSGTLYCGAISLAPKAQIKESLRAELR  
VTERRAEVPTAHPSPSPRPAQGFQTLVVG VVGGLLGSLVLLVWVLAVICSRAARGTIGARRTGQPLKEDPSA  
VPVFSVDY GELDFQWREKTPEPPVPCVPEQTEYATIVFSPGMGTSSPARRGSADGPRSAQPLRPEDGHCSWPL  
\*

## Related Products

CTLA4:CD80:CD86	
<a href="#">H_CD80 aAPC CHO-K1 Cell Line</a>	<a href="#">H_CD80 PDL1 aAPC CHO-K1 Cell Line</a>
<a href="#">H_CTLA4 PD-1 Reporter Cell Line</a>	<a href="#">H_CTLA4 Reporter Jurkat Cell Line</a>
<a href="#">Canine_CTLA4 CHO-K1 Cell Line</a>	<a href="#">Cynomolgus_CTLA4 HEK-293 Cell Line</a>
<a href="#">H_CTLA4 (Full-Length) CHO-K1 Cell Line</a>	<a href="#">H_CTLA4 CHO-K1 Cell Line</a>
<a href="#">H_CTLA4 HEK-293 Cell Line</a>	<a href="#">H_CTLA4 Jurkat Cell Line</a>
<a href="#">Anti-CTLA4 hIgG1 Reference Antibody (Ipibio)</a>	<a href="#">Anti-CTLA-4/PD-1 hIgG1 Bispecific Antibody(Cadonilimab)</a>
<a href="#">Anti-CTLA4×PD-1 hIgG1 Reference Antibody (Cadbio)</a>	<a href="#">Anti-H_CD80 hIgG1 Antibody(Galiximab)</a>
<a href="#">Anti-H_CTLA-4 hIgG1 Antibody(Ipilimumab)</a>	<a href="#">Anti-mouse CTLA4 mIgG2b Antibody(9D9)</a>
<a href="#">Anti-mouse CTLA4 Syrian Hamster IgG2 Antibody(9H10)</a>	
<a href="#">Biotinylated Cynomolgus CTLA4 Protein; His-Avi Tag</a>	<a href="#">Biotinylated Mouse CTLA4 Protein; His-Avi Tag</a>
<a href="#">Cynomolgus CTLA4 Protein; His Tag</a>	<a href="#">Human CD80 Protein; His Tag</a>
<a href="#">Human CTLA4 Protein; His Tag</a>	<a href="#">Mouse CTLA4 Protein; His Tag</a>

## License Agreement:

**By purchasing and using this cell line product, the user voluntarily agrees to accept and abide by the following policies:**

- This cell line product is restricted to research use only and shall not be used for any commercial purposes.
- This product is strictly prohibited from being used in the diagnosis or treatment of human or animal diseases, and shall not be directly used in experiments involving humans.
- Users and their contractors engaged for their benefit may use this material and its derivatives only within the agreed research scope; modification of the material is not permitted, nor may it be distributed, sold, transferred, or otherwise provided to any other entity (including affiliates).
- If use beyond the above scope is required, prior written permission from Genomeditech (Shanghai) Co.,Ltd. must be obtained. For details, please contact Genomeditech (Shanghai) Co.,Ltd.