

# Product Sheet

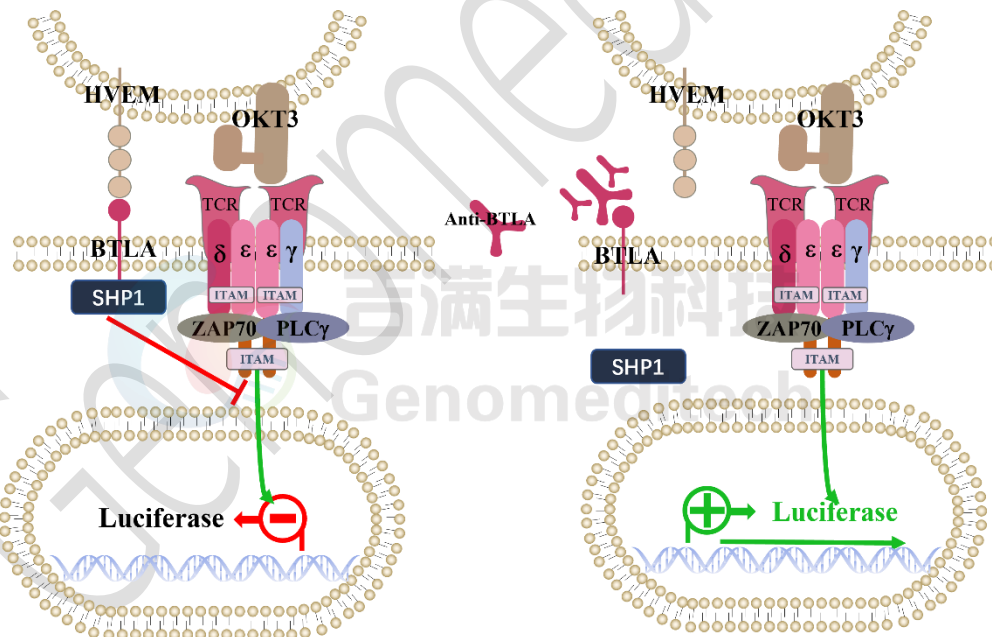
## H\_HVEM aAPC CHO-K1 Cell Line

Catalog number: GM-C25499

Version 3.3.1.241220

B and T lymphocyte attenuator (BTLA; CD272) is an Ig superfamily member that negatively regulates immune cell activation, primarily expressed on B cells, T cells, and dendritic cells. Its natural ligand, herpetic virus entry mediator (HVEM; TNFRSF14), is part of the tumor necrosis factor receptor superfamily. BTLA and HVEM modulate T cell and antigen-presenting cell functions through their cell surface expression. BTLA binding to HVEM inhibits T cell proliferation, downregulates the activation marker CD25, and suppresses cytokine production (IFN- $\gamma$ , IL-2, IL-4, IL-10) without causing apoptosis, leading to reduced T cell activation and proliferation.

The H\_HVEM aAPC CHO-K1 Cell Line is a clonal stable CHO-K1 cell line that constitutively expresses human HVEM and OKT3. The cell line is co-cultured with the H\_BTLA Reporter Cell Line (Cat. GM-C28122). The binding of BTLA to HVEM inhibits T cell signaling. By adding Anti-BTLA antibodies, the interactions of BTLA-HVEM are blocked, thereby restoring T cell signaling. The luciferase readout indicates the activation level of the signaling pathway, allowing evaluation of the in vitro effects of BTLA related drugs.



---

## Specifications

---

<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>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

---

<b>Reagent</b>	<b>Manufacturer/Catalogue No.</b>
F12K	BOSTER/PYG0036
Fetal Bovine Serum	Cegrogen biotech/A0500-3010
Pen/Strep	Thermo/15140-122
Blasticidin	Genomeditech/ <a href="#">GM-040404</a>
Puromycin	Genomeditech/ <a href="#">GM-040401</a>
Anti-TNFRSF14(HVEM) hIgG4 Antibody	Genomeditech/ <a href="#">GM-49928AB</a>

---

## Figures

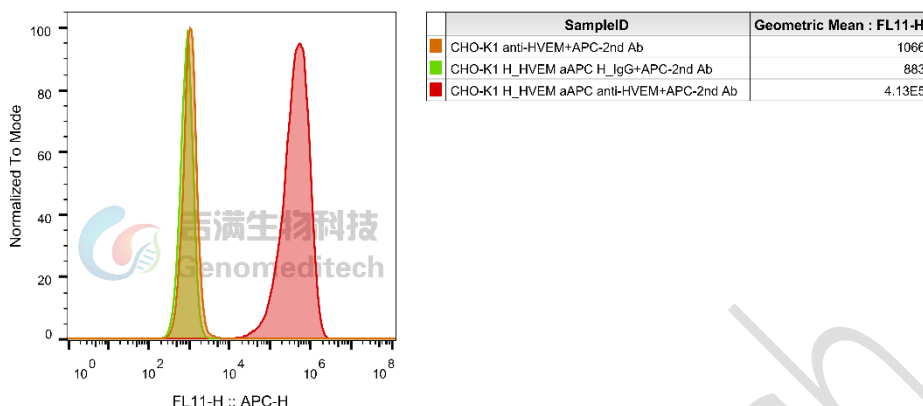


Figure 1 | H\_HVEM aAPC CHO-K1 Cell Line (Cat. GM-C25499) was determined by flow cytometry using Anti-TNFRSF14(HVEM) hIgG4 Antibody (Cat. GM-49928AB).

## 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.
- Resuspend the cells in pre-cooled freezing medium and adjust the cell density to 5E6 cells/mL.
- Aliquot 1 mL into each vial.
- 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.

- Remove and discard culture medium.
- Briefly rinse the cell layer with PBS to remove all traces of serum that contains trypsin inhibitor.
- 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).
- 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.
- Add 2.0 mL of growth medium to mix well and aspirate cells by gently pipetting.
- After centrifugation, resuspend the pellet and add appropriate aliquots of the cell suspension to new culture vessels.
- 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

- 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.

## Related Products

BTLA:HVEM:LIGHT	
<a href="#">H_BTLA PD-1 Reporter Cell Line</a>	<a href="#">H_BTLA Reporter Cell Line</a>
<a href="#">H_HVEM PD-L1 aAPC CHO-K1 Cell Line</a>	<a href="#">H_HVEM Reporter Jurkat Cell Line</a>
<a href="#">Cynomolgus_BTLA HEK-293 Cell Line</a>	<a href="#">H_BTLA CHO-K1 Cell Line</a>
<a href="#">H_BTLA HEK-293 Cell Line</a>	<a href="#">H_LIGHT(TNFSF14) CHO-K1 Cell Line</a>
<a href="#">H_TNFRSF14(HVEM) CHO-K1 Cell Line</a>	
<a href="#">Anti-BTLA hIgG4 Antibody(22B3)</a>	<a href="#">Anti-BTLA hIgG4 Antibody(Icatolimab)</a>
<a href="#">Anti-TNFRSF14(HVEM) hIgG4 Antibody</a>	<a href="#">Anti-TNFSF14 hIgG4 Antibody</a>

## Limited Use License Agreement

Genomeditech (Shanghai) Co., Ltd grants to the Licensee all intellectual property rights, exclusive, non-transferable, and non-sublicensable rights of the Licensed Materials; Genomeditech (Shanghai) Co., Ltd will retain ownership of the Licensed Materials, cell line history packages, progeny, and the Licensed Materials including modified materials.

Between Genomeditech (Shanghai) Co., Ltd, and Licensee, Licensee is not permitted to modify cell lines in any way. The Licensee shall not share, distribute, sell, sublicense, or otherwise provide the Licensed Materials, or progenitors to third parties such as laboratories, departments, research institutions, hospitals, universities, or biotechnology companies for use other than for the purpose of outsourcing the Licensee's research.

Please refer to the Genomeditech Cell Line License Agreement for details.

Genomeditech