

# Product Sheet

## H\_CCR4 Reporter 293 Cell Line

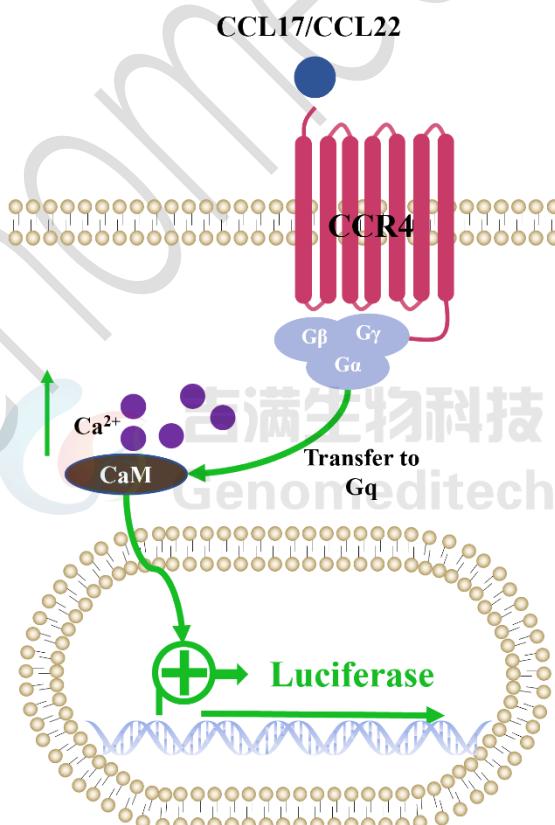
Catalog number: GM-C05129

Version 3.3.1.260201

CCR4 (C-C Chemokine Receptor Type 4) is a G protein-coupled receptor in the chemokine receptor family, crucial for the immune system. It is mainly expressed on T cells, dendritic cells, and some tumor cells. Its primary ligands, CCL17 (TARC) and CCL22 (MDC), are key in regulating immune responses, inflammation, and allergies.

CCR4 signaling is activated by ligand binding, which triggers G protein activation. This activates G $\alpha$ i proteins, inhibiting adenylate cyclase and lowering intracellular cAMP levels. This process releases intracellular calcium and activates downstream pathways like MAPK and PI3K/Akt, enhancing cell migration, proliferation, and survival.

H\_CCR4 Reporter 293 Cell Line is a clonal stable cell line constructed using lentiviral technology, constitutive expression of the CCR4 gene, along with signal-dependent expression of a luciferase reporter gene. When CCL17(TARC) or CCL22(MDC) binds to CCR4, it activates downstream signaling pathways, leading to the expression of luciferase. The luciferase activity measurement indicates the activation level of the signaling pathway and can thus be used to evaluate the in vitro effects of drugs related to CCR4.



## 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>	DMEM+10% FBS+1% P.S
<b>Growth medium</b>	DMEM+10% FBS+1% P.S+4 $\mu$ g/mL Blasticidin+400 $\mu$ g/mL G418+0.75 $\mu$ g/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.
DMEM	Gibco/C11995500BT
Fetal Bovine Serum	ExCell/FSP500
Pen/Strep	Thermo/15140-122
Blasticidin	Genomeditech/ <a href="#">GM-040404</a>
G418	Genomeditech/ <a href="#">GM-040402</a>
Puromycin	Genomeditech/ <a href="#">GM-040401</a>
Recombinant Human TARC (CCL17)	PEPROTECH/300-30
Recombinant Human CCL22/MDC Protein	R&D SYSTEMS/336-MD-025/CF
GMOne-Step 2.0 Luciferase Reporter Gene Assay Kit	Genomeditech/ <a href="#">GM-040513</a>

## Figures

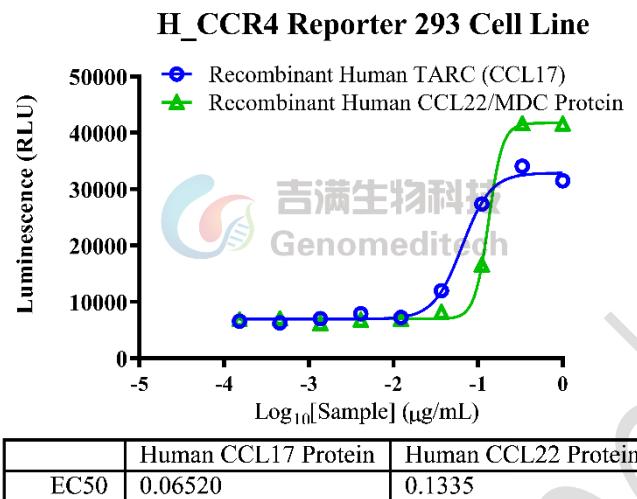


Figure 1 | Response to CCL17 or CCL22 protein. The H\_CCR4 Reporter 293 Cell Line (Cat. GM-C05129) at a concentration of 1.5E4 cells/well (96-well format) was separately stimulated with serial dilutions of Recombinant Human TARC (CCL17) (PEPROTECH/300-30) and Recombinant Human CCL22/MDC Protein (R&D SYSTEMS/336-MD-025) in assay buffer (DMEM + 1% FBS + 1% P.S) for 16 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately [4.9] for CCL17, [5.7] for CCL22. Data are shown by drug mass concentration.

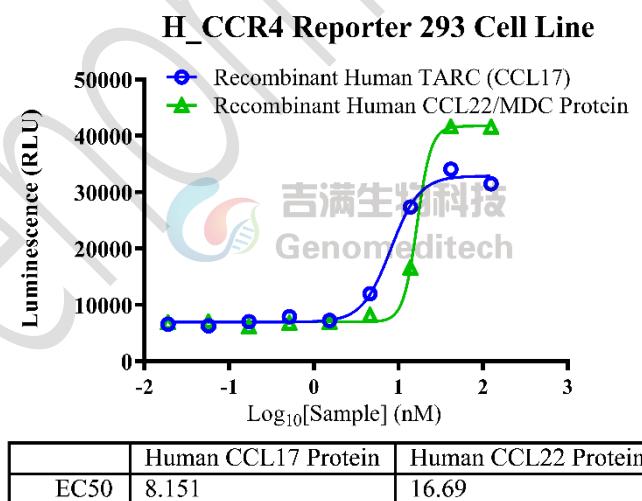


Figure 2 | Response to CCL17 or CCL22 protein. The H\_CCR4 Reporter 293 Cell Line (Cat. GM-C05129) at a concentration of 1.5E4 cells/well (96-well format) was separately stimulated with serial dilutions of Recombinant Human TARC (CCL17) (PEPROTECH/300-30) and Recombinant Human CCL22/MDC Protein (R&D SYSTEMS/336-MD-025) in assay buffer (DMEM + 1% FBS + 1% P.S) for 16 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately [4.9] for CCL17, [5.7] for CCL22. Data are shown by drug molar concentration.

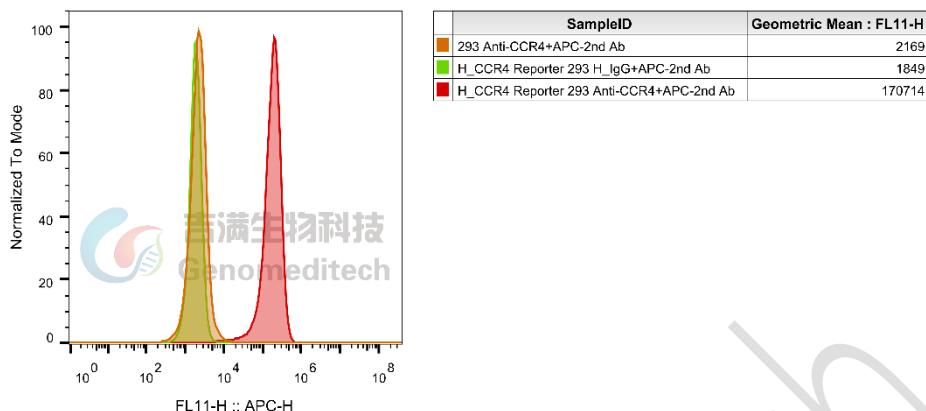


Figure 3 | H\_CCR4 Reporter 293 Cell Line (Cat. GM-C05129) was determined by flow cytometry using Anti-H\_CCR4 hIgG1 Antibody(Mogamulizumab) (Cat. GM-23370AB).

## 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.

- 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: DMEM+10% FBS+1% P.S+4 µg/mL Blasticidin+400 µg/mL G418+0.75 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) Subculturing is necessary when the cell density reaches 80%. It is recommended to perform subculturing at a ratio of 1:3 to 1:4 every 2-3 days. Ensure that the density does not exceed 80%, as overcrowding can lead to reduced viability due to compression.
- b) Remove and discard culture medium.
- c) Briefly rinse the cell layer with PBS to remove all traces of serum that contains trypsin inhibitor.
- d) 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).
- e) 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.
- f) Add 2.0 mL of growth medium to mix well and aspirate cells by gently pipetting.
- g) After centrifugation, resuspend the pellet and add appropriate aliquots of the cell suspension to new culture vessels.
- h) Incubate cultures at 37°C.

**Subcultivation Ratio: A subcultivation ratio of 1:3 - 1:4 is recommended**

**Medium Renewal: Every 2 to 3 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.
- b) Ensure that the cell density does not exceed 80%, as overcrowding may lead to reduced viability due to compression.

## Related Products

CCR4	
<a href="#">Cynomolgus_CCR4 HEK-293 Cell Line</a>	<a href="#">H_CCR4 CHO-K1 Cell Line</a>
<a href="#">H_CCR4 HEK-293 Cell Line</a>	
<a href="#">Anti-H_CCR4 hIgG1 Antibody(Mogamulizumab)</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).
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