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# Product Sheet

## Tango-H_CXCR5 CHO-K1 Cell Line

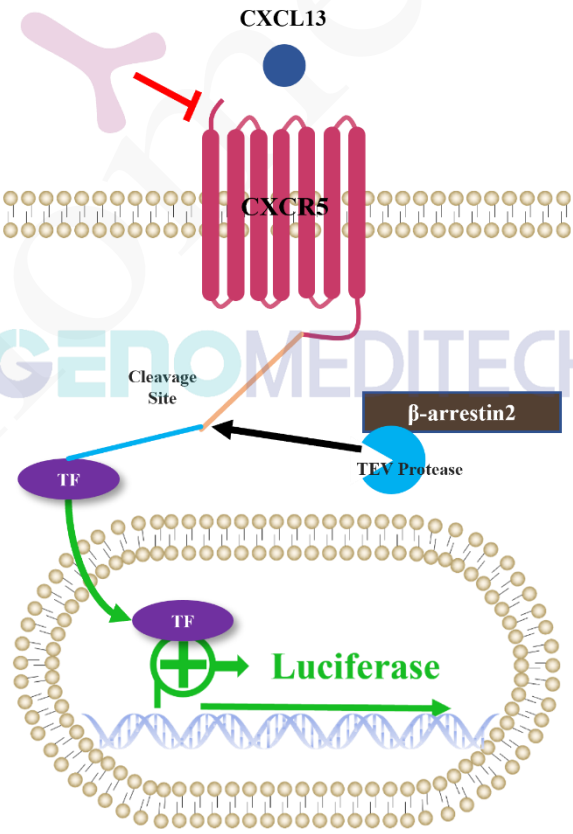
Catalog number: GM-C45288

Version 4.0.26.1112

The TANGO assay detects GPCR activation by analyzing ligand-induced effects (e.g., by small-molecule drugs or antibodies) through fluorescent signals. It offers high signal specificity and directly reflects intracellular signal transduction, and is widely used in drug screening and GPCR research.

A plasmid with GPCR, a V2 tail, a TEV protease site, and the transcription factor (TF) is constructed. Upon ligand activation, GPCR recruits arrestin and TEV protease, which cleaves the TEV site, releasing TF. This factor enters the nucleus, activating a reporter gene (e.g., luciferase). Fluorescent signal intensity corresponds to GPCR activation, allowing quantitative analysis.

Tango-H_CXCR5 CHO-K1 Cell Line is a clonal stable CHO-K1 cell line constructed using lentiviral technology, constitutive expression of the CXCR5 gene constructed through Tango technology, along with signal-dependent expression of a luciferase reporter gene. When ligand (e.g., CXCL13) binds to CXCR5, 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 CXCR5.



## Specifications

| | |
|---|---|
| **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 |
| **Recovery Medium** | F12K+10% FBS+1% P.S |
| **Growth medium** | F12K+10% FBS+1% P.S+4 μg/mL Blasticidin+100 μg/mL Hygromycin+4 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. |
|---|---|
| F12K | BOSTER/PYG0036 |
| Fetal Bovine Serum | ExCell/FSP500 |
| Pen/Strep | Thermo/15140-122 |
| Blasticidin | Genomeditech/GM-040404 |
| Hygromycin | Genomeditech/GM-040403 |
| Puromycin | Genomeditech/GM-040401 |
| 96 well round cell culture plate | PakGent/CL-PT096 |
| 96-well White Opaque Plate | Thermo/236108 |
| 96-well U-bottom Plate | Saining/1014010 |
| GMOne-Step 2.0 Luciferase Reporter Gene Assay Kit | Genomeditech/GM-040513 |
| PE Rabbit anti-Human CD185/CXCR5 mAb (A26188) | abclonal/A26188 |
| Countess 3 Automated Cell Counter | ThermoFisher/A49891 |
| NovoCyte Flow Cytometer | Agilent/NovoCyte 2060R |

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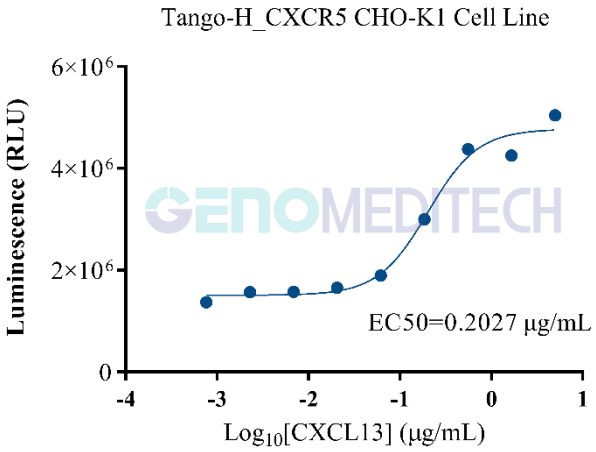
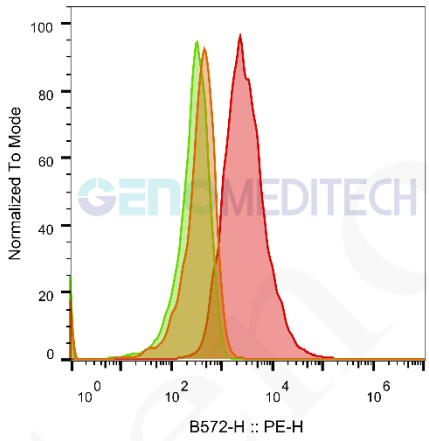
# Data

## Signaling Pathway




Response to BCA-1/CXCL13, Human. Tango-H_CXCR5 CHO-K1 Cell Line (Cat. GM-C45288) was seeded at a density of 1E4 cells per well in a 96-well plate and incubated overnight. The next day, serial dilutions of the BCA-1/CXCL13, Human (Genscript/Z02826-20) were added to the pre-seeded cells. The mixture was incubated for an additional 16 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately [3.4]. Data are shown by drug mass concentration.

## Expression




| | SampleID | Geometric Mean : B572-H |
|---|---|---|
| | CHO-K1 PE Rabbit anti-Human CXCR5 Ab | 314 |
| | Tango-H_CXCR5 CHO-K1 PE Rabbit anti-Mouse_IgG Ab | 236 |
| | Tango-H_CXCR5 CHO-K1 PE Rabbit anti-Human CXCR5 Ab | 2841 |

Tango-H_CXCR5 CHO-K1 Cell Line (Cat. GM-C45288) was determined by flow cytometry using PE Rabbit anti-Human CD185/CXCR5 mAb (A26188) (abclonal/A26188).

## 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.

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 x 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 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+100 μg/mL Hygromycin+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.

## Related Products

| CXCL13:CXCR5 | |
|---|---|
| H_CXCR5 Gq Reporter CHO-K1 Cell Line | H_CXCR5 Gqi5 Reporter CHO-K1 Cell Line |
| Cynomolgus_CXCR5 CHO-K1 Cell Line | Cynomolgus_CXCR5 HEK-293 Cell Line |
| H_CXCR5 CHO-K1 Cell Line | H_CXCR5 HEK-293 Cell Line |
| Mouse_CXCR5 HEK-293 Cell Line | H_CXCR5 BaF3 Cell Line |
| Anti-CXCR5 hIgG1 Antibody(h11G2) | |

## 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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