Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

Product Sheet

H_TNFR2 Reporter Jurkat Cell Line

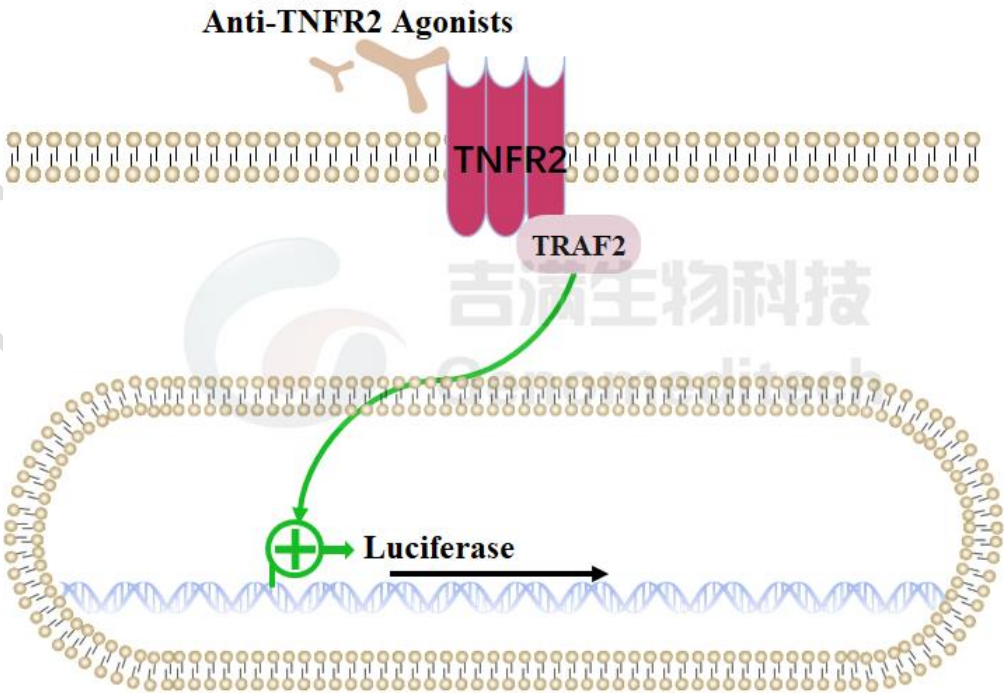
Catalog number: GM-C25209

Version 3.3.1.250103

Tumor necrosis factor receptor 2 (TNFR2) is a key cell surface receptor in the tumor necrosis factor receptor superfamily, primarily expressed on immune cells like T cells, B cells, and dendritic cells. It regulates immune responses, promotes cell proliferation and survival, and is particularly important for T cell activation and function. TNFR2 activation enhances immune cell function and plays a significant role in inflammation and autoimmune diseases.

Regarding signaling pathways, TNFR2 activates several downstream pathways by binding to its ligand, tumor necrosis factor alpha (TNF-α). This activation recruits adaptor proteins such as TRAF2 and TRAF1, leading to the activation of NF-κB and MAPK pathways, which promote cell proliferation, survival, and cytokine production. Additionally, TNFR2 enhances anti-tumor immune responses and influences the tumor microenvironment by regulating immune cell metabolism and function.

H_TNFR2 Reporter Jurkat Cell Line is a clonal stable Jurkat cell line constructed using lentiviral technology, constitutive expression of the TNFR2 gene, along with signal-dependent expression of a luciferase reporter gene. When TNF-α binds to TNFR2, 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 TNFR2.



Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

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	RPMI 1640+10% FBS+1% P.S
Growth medium	RPMI 1640+10% FBS+1% P.S+3.5 μg/mL Blasticidin+0.75 μg/mL Puromycin
Note	None
Freezing Medium	90% FBS+10% DMSO
Growth properties	Suspension
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.
RPMI 1640	VivaCell/C3010-0500
Fetal Bovine Serum	Cegrogen biotech/A0500-3010
Pen/Strep	Thermo/15140-122
Blasticidin	Genomeditech/GM-040404
Puromycin	Genomeditech/GM-040401
H_TNFR2 Null Reporter Cell Line	Genomeditech/GM-C27615
Anti-H_TNFRSF1B(TNFR2) hIgG1 Antibody(UC2.3.8)	Genomeditech/GM-49245AB
GMOne-Step Luciferase Reporter Gene Assay Kit	Genomeditech/GM-040503

Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

Figures

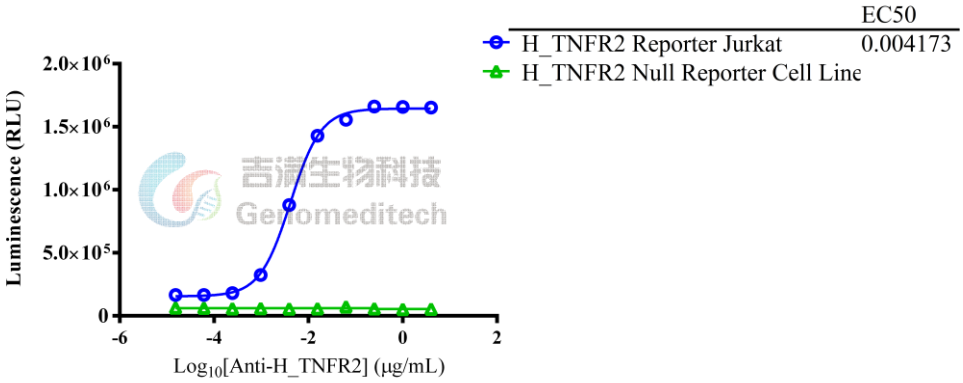


Figure 1 | Response to Anti-H_TNFRSF1B(TNFR2) hIgG1 Antibody(UC2.3.8). The H_TNFR2 Reporter Jurkat Cell Line (Cat. GM-C25209) the control cell line(H_TNFR2 Null Reporter), with only stable expression of the signal-dependent luciferase reporter gene, at a concentration of 1E5 cells/well (96-well format) was stimulated with serial dilutions of Anti-H_TNFRSF1B(TNFR2) hIgG1 Antibody(UC2.3.8) (Cat. GM-49245AB) in assay buffer (RPMI 1640 + 1% FBS + 1% P.S) for 16 hours. The firefly luciferase activity was measured using the GMOne-Step Luciferase Reporter Gene Assay Kit (Cat. GM-040503). The maximum induction fold was approximately [10.0]. Data are shown by drug mass concentration.

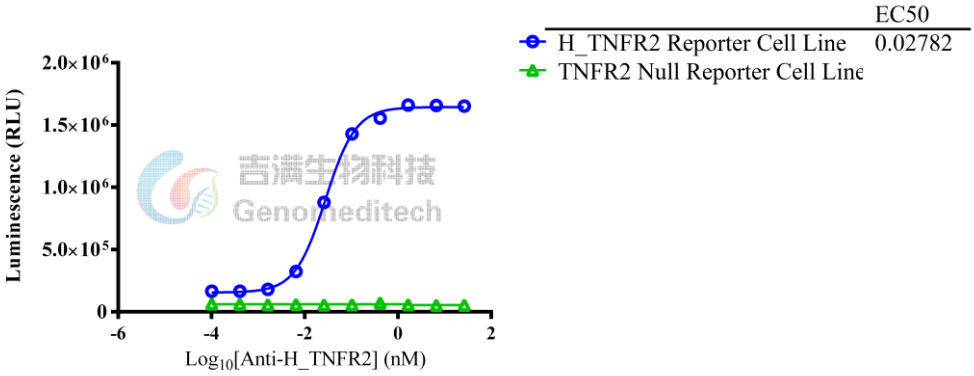
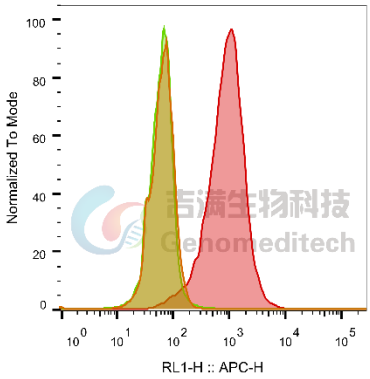


Figure 2 | Response to Anti-H_TNFRSF1B(TNFR2) hIgG1 Antibody(UC2.3.8). The H_TNFR2 Reporter Jurkat Cell Line (Cat. GM-C25209) the control cell line(H_TNFR2 Null Reporter), with only stable expression of the signal-dependent luciferase reporter gene, at a concentration of 1E5 cells/well (96-well format) was stimulated with serial dilutions of Anti-H_TNFRSF1B(TNFR2) hIgG1 Antibody(UC2.3.8) (Cat. GM-49245AB) in assay buffer (RPMI 1640 + 1% FBS + 1% P.S) for 16 hours. The firefly luciferase activity was measured using the GMOne-Step Luciferase Reporter Gene Assay Kit (Cat. GM-040503). The maximum induction fold was approximately [10.0]. Data are shown by drug molar concentration.

Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com



SampleID	Geometric Mean : RL1-H
H_TNFR2 Null Reporter Cell Line anti-H_TNFR2+APC-2nd Ab	63.7
H_TNFR2 Reporter Jurkat H_IgG+APC-2nd Ab	61.5
H_TNFR2 Reporter Jurkat anti-H_TNFR2+APC-2nd Ab	843

Figure 3 | H_TNFR2 Reporter Jurkat Cell Line (Cat. GM-C25209) was determined by flow cytometry using Anti-H_TNFRSF1B(TNFR2) hIgG1 Antibody(UC2.3.8) (Cat. GM-49245AB).

Cell Recovery

Recovery Medium: RPMI 1640+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 complete medium. And dispense the suspension into 1 - 2 T-25 culture flasks.

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.

Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

Cell passage

Growth medium: RPMI 1640+10% FBS+1% P.S+3.5 μg/mL Blasticidin+0.75 μg/mL Puromycin

Approximately 48-72 hours after the initial thawing, the cells can be passaged for the first time. After this initial passage, the culture medium can be adjusted to growth medium supplemented with antibiotics. If cells are not passaged within 48 hours, it is recommended to add some fresh recovery medium and place the flask horizontally.

a) When the cell density reaches 1.5 - 2E6 cells/mL, subculture the cells. Do not allow the cell density to exceed 2E6 cells/mL.

b) It is recommended to use T-25 flasks for subculturing.

c) These cells are suspension cells, and it is recommended to use the "half-medium change" method to maintain optimal cell conditions during passaging.

d) During passaging, you can directly add fresh growth medium to the culture flask, gently pipette to resuspend the cells, and then transfer the cell suspension to a new T-25 flask for continued culture.

Subcultivation Ratio: Maintain cultures at a cell concentraion between 3E5 and 1E6 viable cells/mL.

Medium Renewal: Every 2 to 3 days

Notes

a) These cells are sensitive to density, so please ensure that the cell density is maintained within an appropriate range during culture and subculturing.

b) During the first passage, pay attention to the nutrient supply; if not subculturing, make sure to add fresh recovery medium every other day as needed.

Related Products

TNF:TNFR2:TNFR1	
H_TNFR2 Null Reporter Cell Line	H_TNFR2 Reporter V2 Cell Line
Cynomolgus_TNFRSF1B(TNFR2) CHO-K1 Cell Line	H_TNFRSF1B(TNFR2) CHO-K1 Cell Line
H_TNFRSF1B(TNFR2) HEK-293 Cell Line	Membrane Bound H_TNFα CHO-K1 Cell Line
Membrane Bound H_TNFα(cleavage-resistant) CHO-K1 Cell Line	
Anti-H_TNFR2 hIgG1 Antibody(1H10)	Anti-H_TNFRSF1B(TNFR2) hIgG1 Antibody(UC2.3.8)
Anti-TNFR1 hIgG1 Antibody(Atrosab)	Anti-TNF-α hIgG1 Antibody（CT-P17）

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.

Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

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.