

Product Sheet

H_Nkp46 Reporter Jurkat Cell Line

Catalog number: GM-C17954

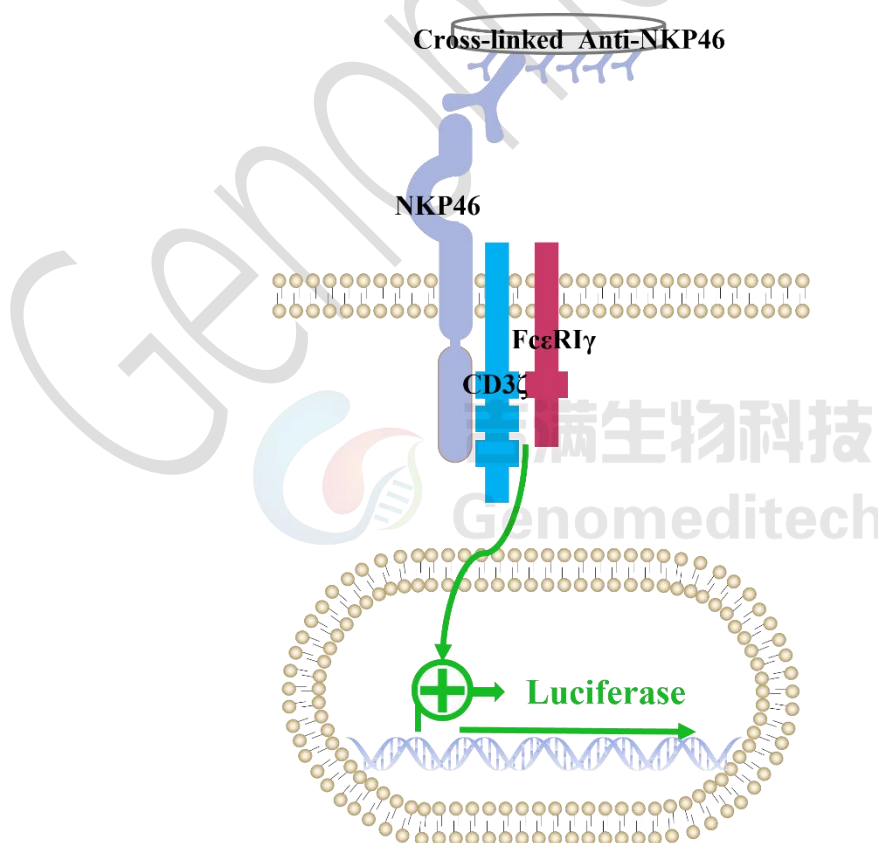
Version 3.3.1.241029

NKp46, encoded by the NCR1 gene, is also known as lymphocyte antigen 94 homolog, NK cell activation receptor, natural killer cell p46-related protein, and CD335. It is a 46 kDa glycoprotein belonging to the immunoglobulin (Ig) superfamily and is frequently expressed on tumor-infiltrating lymphocytes. Antibodies that activate NKp46 can induce not only the cytotoxic effects of NK cells but also the release of cytokines.

NKp46 interacts through its positively charged transmembrane domain with signaling adaptor proteins CD3 ζ and Fc epsilon R1 gamma, which carry ITAMs (immunoreceptor tyrosine-based activation motifs). These signaling proteins can form disulfide-linked homodimers and heterodimers, participating in the signal transduction process and enhancing the function of NK cells.

H_Nkp46 Reporter Jurkat Cell Line is a clonal stable Jurkat cell line constitutively expressing the Nkp46 receptor and an adapter membrane molecule, along with signal-dependent expression of a luciferase reporter gene.

The addition of coated NKp46 antibody agonists stimulates Nkp46 to bind with CD3 ζ and Fc epsilon R1 gamma, activating downstream reporter genes and inducing luciferase expression. This system can be used to evaluate the in vitro effects of antibodies targeting NKG2D.



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+0.75 µg/mL Puromycin+400 µg/mL G418+3.5 µg/mL Blasticidin |
| 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 |
| Puromycin | Genomeditech/ GM-040401 |
| G418 | Genomeditech/ GM-040402 |
| Blasticidin | Genomeditech/ GM-040404 |
| Clear Flat-Bottom Immuno Nonsterile 96-Well Plates | Thermo/442404 |
| Anti-NCR1(NKP46) hIgG1 Antibody(A26-BhIgG1) | Genomeditech/ GM-29003AB |
| Human IgG1 Isotype Control(Anti-RSV) | Genomeditech/ GM-47471AB |
| GMOne-Step Luciferase Reporter Gene Assay Kit | Genomeditech/ GM-040503 |

Figures

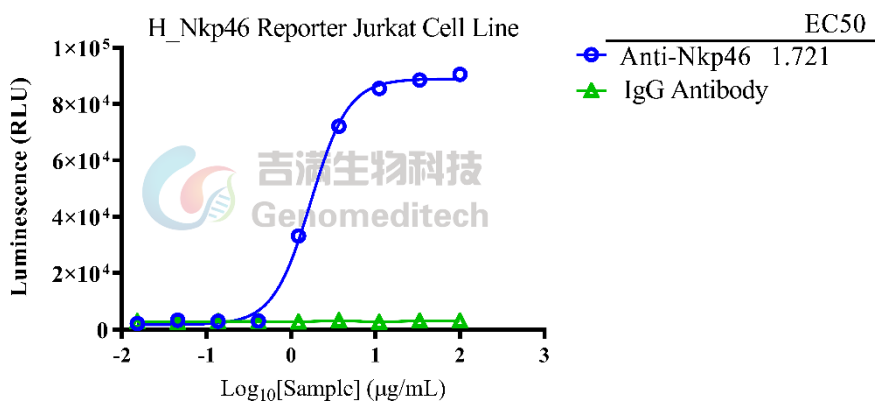


Figure 1 | Response to Anti-NCR1(NKP46) hIgG1 Antibody. H_Nkp46 Reporter Jurkat Cell Line (Cat. GM-C17954) at a concentration of 1E5 cells/well in a 96-well format. The wells were coated overnight with serial dilutions of Anti-NCR1(NKP46) hIgG1 Antibody (A26-BhlgG1) (Cat. [GM-29003AB](#)) and Human IgG1 Isotype Control (Anti-RSV) (Cat. [GM-47471AB](#)) in assay buffer (RPMI 1640 + 1% FBS + 1% P.S). After coating, the cells were added and incubated 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 [40.2]. Data are shown by drug mass concentration.

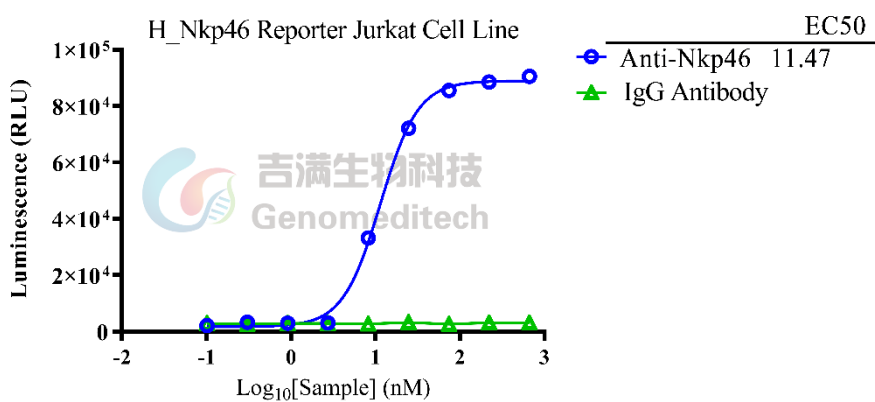


Figure 2 | Response to Anti-NCR1(NKP46) hIgG1 Antibody. H_Nkp46 Reporter Jurkat Cell Line (Cat. GM-C17954) at a concentration of 1E5 cells/well in a 96-well format. The wells were coated overnight with serial dilutions of Anti-NCR1(NKP46) hIgG1 Antibody (A26-BhlgG1) (Cat. [GM-29003AB](#)) and Human IgG1 Isotype Control (Anti-RSV) (Cat. [GM-47471AB](#)) in assay buffer (RPMI 1640 + 1% FBS + 1% P.S). After coating, the cells were added and incubated 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 [40.2]. Data are shown by drug molar concentration.

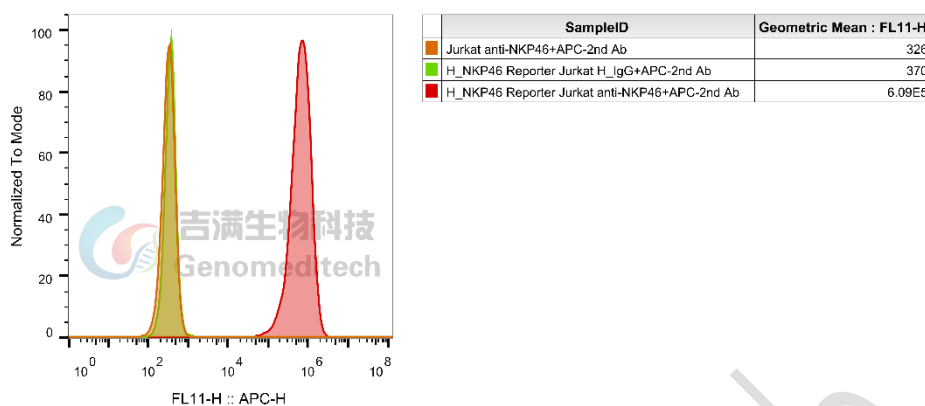


Figure 3 | H_Nkp46 Reporter Jurkat Cell Line (Cat. GM-C17954) was determined by flow cytometry using Anti-NCR1(NKP46) hIgG1 Antibody(A26-BhlgG1) (Cat. GM-29003AB).

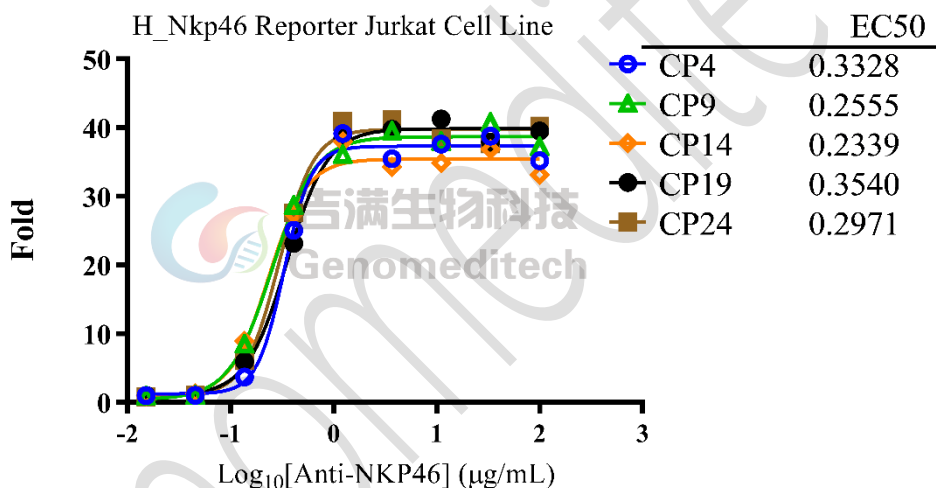


Figure 4 | The passage stability of response to Anti-NCR1(NKP46) hIgG1 Antibody. The passage 4, 9, 14,19 and 24 of H_Nkp46 Reporter Jurkat Cell Line (Cat. GM-C17954) at a concentration of 1E5 cells/well in a 96-well format. The wells were coated overnight with serial dilutions of Anti-NCR1(NKP46) hIgG1 Antibody (A26-BhlgG1) (Cat. GM-29003AB) in assay buffer (RPMI 1640 + 1% FBS + 1% P.S). After coating, the cells were added and incubated for 16 hours. The firefly luciferase activity was measured using the GMOne-Step Luciferase Reporter Gene Assay Kit (Cat. GM-040503). Data are shown by drug mass concentration.

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 $176 \times g$ 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 $176 \times g$ for 3 minutes to collect cells.
- b) Resuspend the cells in pre-cooled freezing medium and adjust the cell density to 5×10^6 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: RPMI 1640+10% FBS+1% P.S+0.75 $\mu\text{g}/\text{mL}$ Puromycin+400 $\mu\text{g}/\text{mL}$ G418+3.5 $\mu\text{g}/\text{mL}$ Blasticidin

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 $1.5 - 2 \times 10^6$ cells/mL, subculture the cells. Do not allow the cell density to exceed 2×10^6 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 concentration between 3×10^5 and 1×10^6 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

| NKp46 | |
|---|--|
| Cynomolgus_Ncr1(NKp46) HEK-293 Cell Line | H_Ncr1(NKp46) CHO-K1 Cell Line |
| H_Ncr1(NKp46) HEK-293 Cell Line | Mouse_Ncr1(NKp46) CHO-K1 Cell Line |
| Rhesus_Ncr1(NKp46) CHO-K1 Cell Line | Rhesus_Ncr1(NKp46) HEK-293 Cell Line |
| Anti-NCR1(NKP46) hIgG1 Antibody(A26-BhlG1) | |
| NKP30:B7-H6 | |
| H_NKP30 Reporter Jurkat Cell Line | Cynomolgus_NCR3LG1(B7-H6) CHO-K1 Cell Line |
| Cynomolgus_NKP30 CHO-K1 Cell Line | H_NCR3LG1(B7-H6) CHO-K1 Cell Line |
| H_NCR3LG1(B7-H6) HEK-293 Cell Line | H_NKP30 CHO-K1 Cell Line |
| H_NKP30 HEK-293 Cell Line | |
| Anti-NKP30 hIgG1 Antibody(BGA-1833) | Anti-B7-H6 hIgG1 Antibody(BI-765049) |
| Biotinylated Cynomolgus NCR3LG1(B7-H6) Protein; His-Avi Tag | Biotinylated Human NCR3LG1(B7-H6) Protein; His-Avi Tag |
| Cynomolgus NCR3LG1(B7-H6) Protein; His Tag | Human NCR3(NKP30) Protein; His Tag |
| Human NCR3LG1(B7-H6) Protein; His Tag | |

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