Human NKp46 (Luc) Jurkat Reporter Cell Development Service Data Sheet

Human NKp46 (Luc) Jurkat Reporter Cell

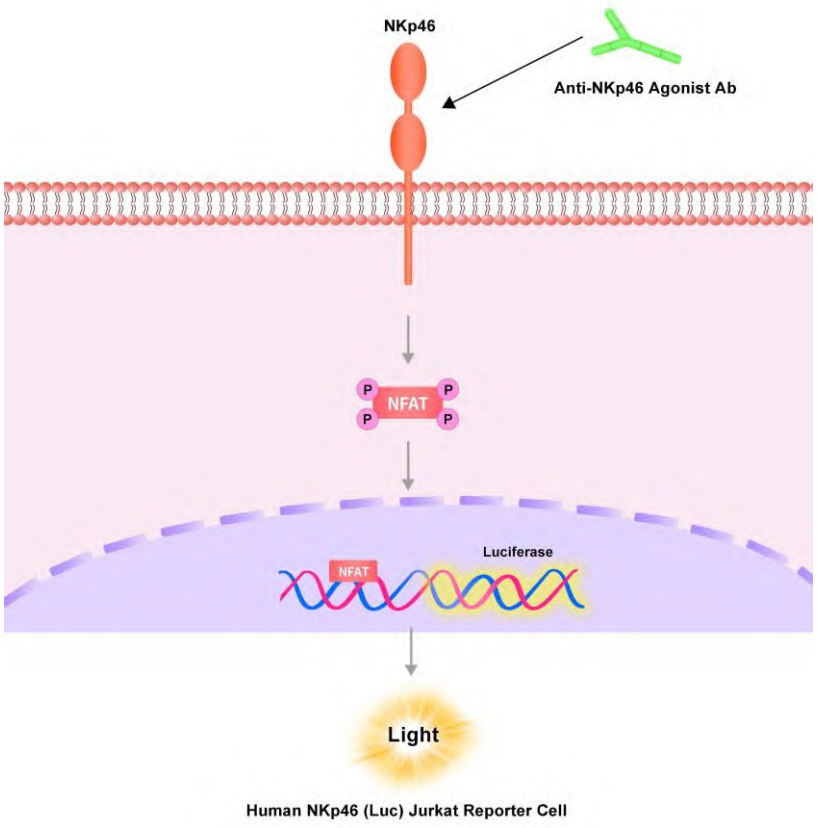
Catalog No.	Size
SCJUR-STF130	2 × (1 vial contains ~5×10^6 cells)

• *Description*

The Human NKp46 (Luc) Jurkat Reporter Cell was engineered to not only express the NFAT response element driving luciferase expressing systems, but also express the receptor full length human NKp46 (Gene ID: 9437). When cocultured with anti-human Nkp46 agonist antibody, the interaction of agonist antibody and NKp46 on the surface of Human NKp46 (Luc) Jurkat Reporter Cell results in NFAT-mediated luminescence.

• *Application*

- Screen for anti-human NKp46 agonist antibody.



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• *Cell Line Profile*

Cell line	Human NKp46 (Luc) Jurkat Reporter Cell
Host Cell	Jurkat
Property	Suspension
Complete Growth Medium	RPMI-1640 + 10% FBS
Selection Marker	Puromycin (5 μg/mL) + Hygromycin (20 μg/mL)
Incubation	37°C with 5% CO_2
Doubling Time	16-20 hours
Transduction Technique	Lentivirus

• *Materials Required for Cell Culture*

- RPMI Medium 1640 (Gibco, Cat.No.11875-093)
- Fetal bovine serum (CellMax, Cat.No.SA211.02)
- Puromycin (InvivoGen, Cat.No.ant-pr-5b)
- Hygromycin B (Invitrogen, Cat.No.10687010)
- Complete Growth Medium: RPMI-1640 + 10% FBS
- Culture Medium: RPMI-1640 + 10% FBS, Puromycin (5 μg/mL), Hygromycin (20 μg/mL)
- Freeze Medium: 90% FBS, 10% (V/V) DMSO
- T-75 Culture flask (Corning, 430641)
- Cryogenic storage vials (SARSTEDT, 72.379.007)
- Thermostat water bath
- Centrifuge
- Luna cell counter (Logos Biosystems, LUNA-Ⅱ)
- CO_2 Incubator (Thermo, 3111)
- Biological Safety Cabinet (Thermo, 1389)

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• *Recovery*

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the cap out of the water. Thawing should be rapid (approximately 5 minutes).
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by spraying with 70% ethanol. All the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 4.0 mL complete growth medium.
4. Count viable cells and spin at approximately 1000 rpm for 5 minutes.
5. Discard the supernatant and resuspend the cell pellet in an appropriate amount of fresh complete growth medium.

   Adjust the cell density of the suspension to 1×10^6 viable cells/mL and transfer cells to an appropriate size vessel.
6. Incubate at 37°C with 5% CO_2 incubator

• *Subculture*

Adjust the cell density at 2×10^5-5×10^5 viable cells/mL by the addition of fresh culture medium or replacement of culture medium. Do not allow the cell density to exceed 3×10^6 cells/mL. T-75 flasks are recommended for subculturing.

- **Medium Renewal:** Add fresh culture medium every 3 to 4 days (depending on cell density)

• *Cryopreservation*

1. Count viable cells and harvest the cell suspension.
2. Centrifuge at 1000 rpm for 5 min at RT and resuspend cells in freezing medium to a concentration of 5×10^6 to 1×10^7 cells/mL.
3. Aliquot into cryogenic storage vials. Place vials in a programmable cooler or an insulated box placed in a –80°C freezer overnight, then transferring to liquid nitrogen storage.

• *Storage*

- **Product format:** Frozen
- **Storage conditions:** Liquid nitrogen immediately upon receipt

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- ***Receptor Assay***

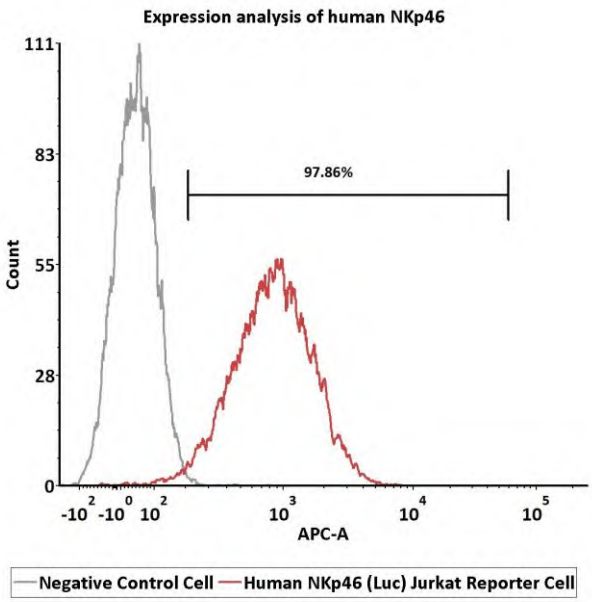


Fig1. Expression analysis of human NKp46 on Human NKp46 (Luc) Jurkat Reporter Cell by FACS. Cell surface staining was performed on Human NKp46 (Luc) Jurkat Reporter Cell or negative control cell using APC-labeled Anti-human NKp46 antibody.

- ***Application***

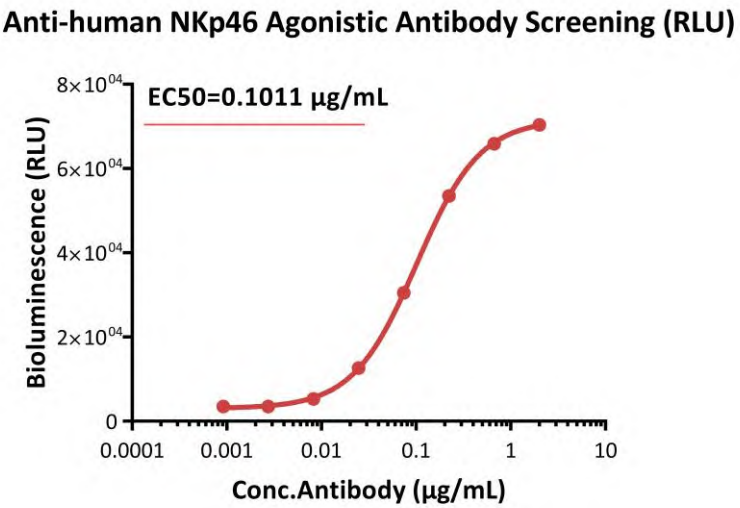


Fig2. Agonistic activity analysis of anti-human NKp46 antibody (RLU). This reporter cell was incubated with serial dilutions of anti-human NKp46 antibody. The EC50 of anti-human NKp46 antibody was approximately 0.1011 μg/mL.

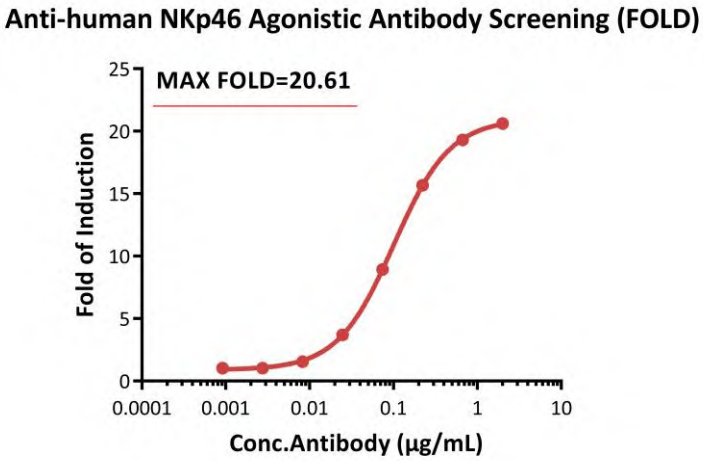
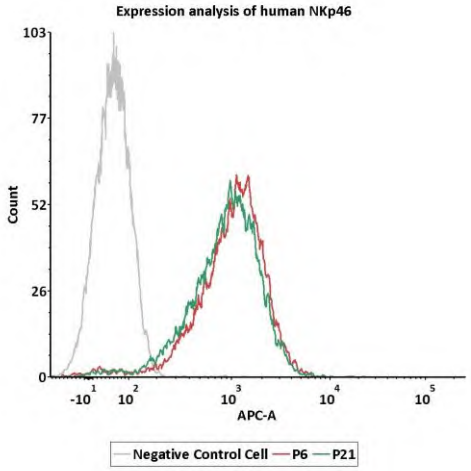


Fig3. Agonistic activity analysis of anti-human NKp46 antibody (FOLD). This reporter cell was incubated with serial dilutions of anti-human NKp46 antibody. The max induction fold was approximately 20.61.

- ***Passage Stability***



Passage	MFI for NKp46 (APC)
P6	1059.76
P21	919.11

Fig4. Passage stability analysis of receptor expression by FACS. Flow cytometry surface staining of human NKp46 on Human NKp46 (Luc) Jurkat Reporter Cell demonstrates consistent mean fluorescent intensity across passage 6-21.

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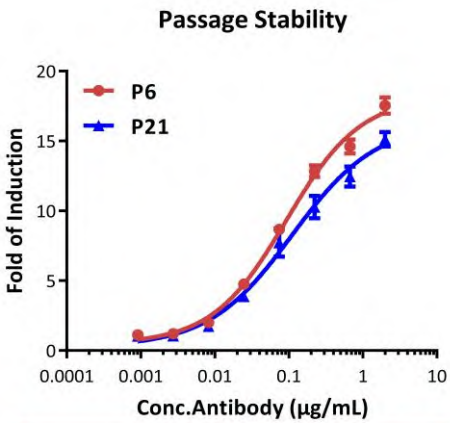

	P6	P21
EC50 (μg/mL)	0.09284	0.1111
Max Fold	17.54	15.12

Fig4. Passage stability analysis by Signaling Bioassay. The continuously growing Human NKp46 (Luc) Jurkat Reporter Cell was stimulated with serial dilutions of anti-human NKp46 antibody. Anti-human NKp46 antibody stimulated response demonstrates passage stabilization (fold induction and EC50) across passage 6-21.

• *License Disclosure*

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• *Related Products*

Products	**Cat.No.**
Human BTLA (Luc) Jurkat Reporter Cell Development Service	SCJUR-STF106