

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

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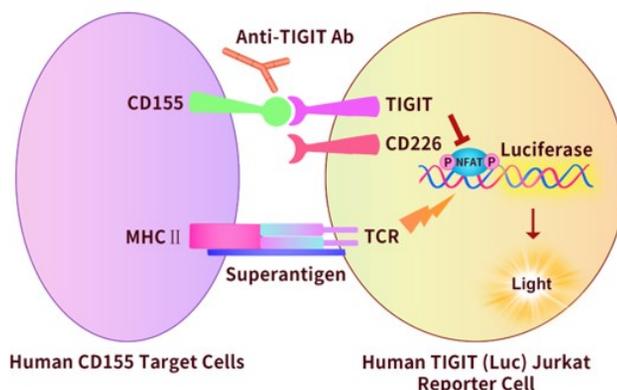
Catalog No.	Size
SCJUR-STF066	2 × (1 vial contains ~5×10 ⁶ cells)

• Description

The Human TIGIT (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 TIGIT (Gene ID: 201633), which can use to evaluate the potency of TIGIT blockade. When co-cultured with target cells expressing human CD155, the TIGIT/CD155 interaction inhibits TCR signaling and NFAT-mediated luminescence. Blocking the TIGIT/CD155 interaction by either anti-TIGIT or anti-CD155 antibodies releases the inhibitory signal and results in TCR activation and NFAT-mediated luminescence.

• Application

- Screen for anti-human TIGIT or anti-human CD155 antibody.



• Cell Line Profile

Cell line	Human TIGIT (Luc) Jurkat Reporter Cell
Host Cell	Jurkat
Property	Suspension
Complete Growth Medium	RPMI-1640 + 10% FBS
Selection Marker	Hygromycin (20 µg/mL) + Puromycin (5 µg/mL)
Incubation	37°C with 5% CO ₂
Doubling Time	16-20 hours
Transduction Technique	Lentivirus

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• *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, Hygromycin (20 µg/mL), Puromycin (5 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)
- CO₂ Incubator (Thermo, 3111)
- Biological Safety Cabinet (Thermo, 1389)

• *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% CO₂ incubator

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• *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*

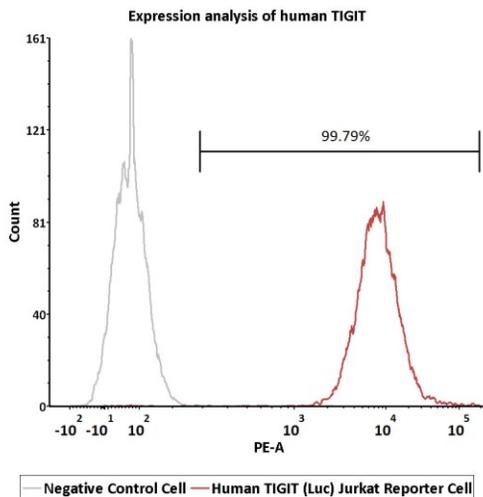


Fig1. Expression analysis of human TIGIT on Human TIGIT (Luc) Jurkat Reporter Cell by FACS. Human TIGIT (Luc) Jurkat Reporter Cell or negative control cell were stained with PE-labeled anti-human TIGIT antibody.

• *Application*

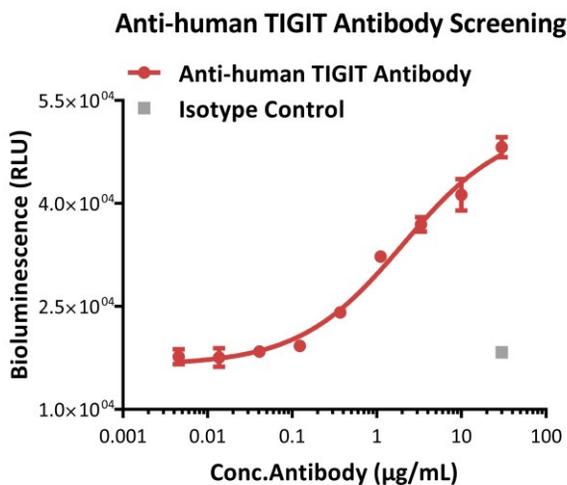


Fig2. Blocking activity of anti-human TIGIT antibody. This reporter cell was incubated with serial dilutions of antibodies in the presence of target cells expressing human CD155. The EC50 of anti-human TIGIT antibody was approximately 2.05 µg/mL.

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• *Related Products*

Products

Cat.No.

Human PD-1 (Luc) Jurkat Reporter Cell Development Service

SCJUR-STF064

Human LAG-3 (Luc) Jurkat Reporter Cell Development Service

SCJUR-STF065