

Human DR3 (TL1A receptor) (Luc) Jurkat Reporter Cell Development Service Data Sheet

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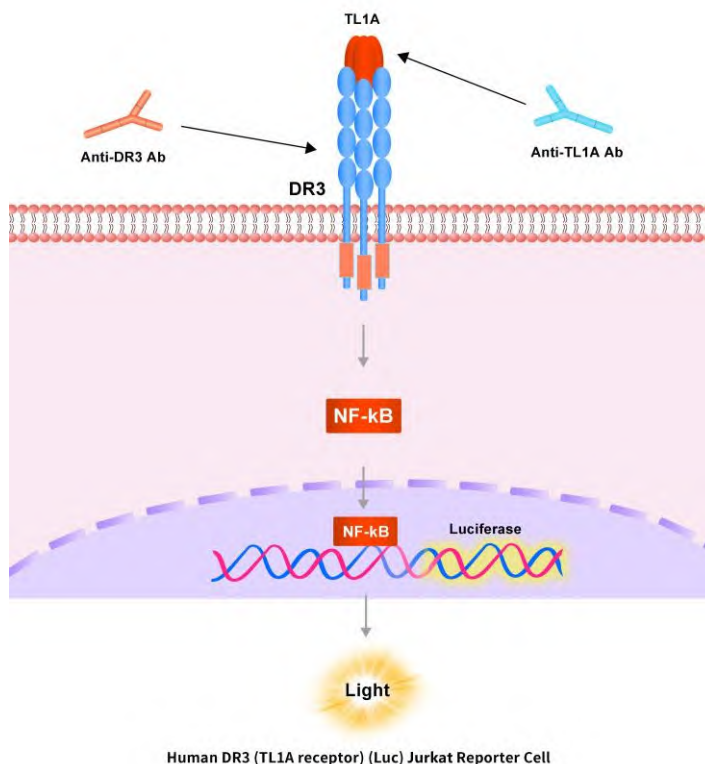
Catalog No.	Size
SCJUR-STF178	2 × (1 vial contains ~5×10 ⁶ cells)

• Description

The Human DR3 (TL1A receptor) (Luc) Jurkat Reporter Cell was engineered to not only express the NF-κB signaling response element, but also express the receptor human DR3 (TL1A receptor) (Gene ID: 8718). When stimulated with human TL1A protein, the TL1A/DR3 interaction drives NF-κB-mediated luminescence. Inhibition of TL1A binding to DR3 by either anti-TL1A or anti-DR3 antibodies results in a decrease in luminescence.

• Application

- Screen for neutralizing antibodies blocking the stimulation of human TL1A protein.



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• Cell Line Profile

Cell line	Human DR3 (TL1A receptor) (Luc) Jurkat Reporter Cell
Host Cell	Jurkat
Property	Suspension
Complete Growth Medium	RPMI-1640 + 10% FBS
Selection Marker	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)
- Hygromycin B (Invitrogen, Cat.No.10687010)
- Complete Growth Medium: RPMI-1640 + 10% FBS
- Culture Medium: RPMI-1640 + 10% FBS, 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)
- CO₂ 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% CO₂ 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

• *Signaling Bioassay*

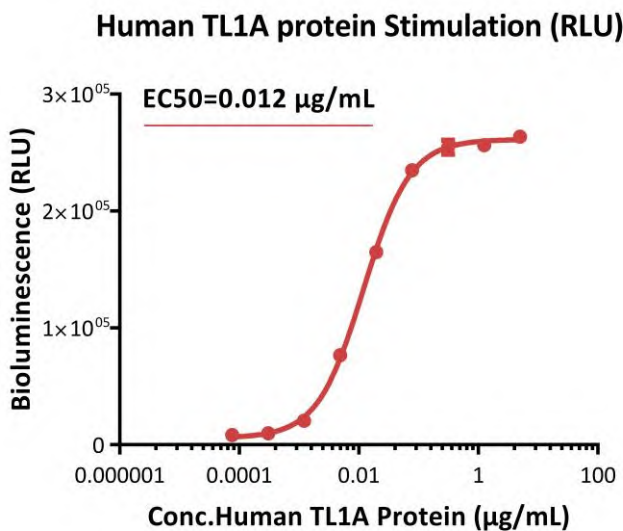


Fig1. Response to human TL1A protein (RLU). This reporter cell was incubated with serial dilutions of human TL1A protein (Cat.No.TLA-H5243). The EC50 was approximately 0.012 µg/mL.

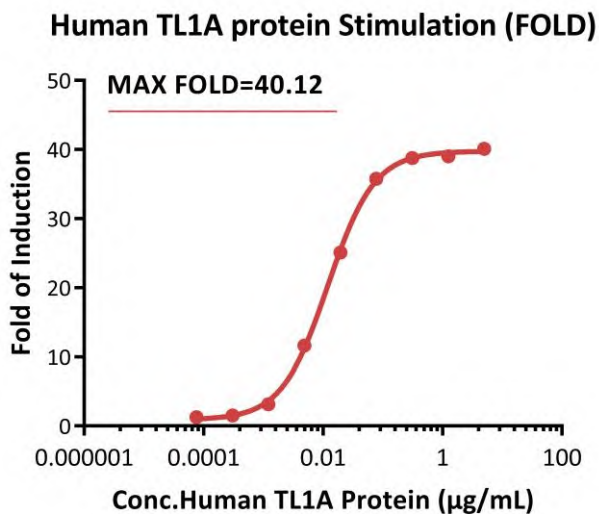


Fig2. Response to human TL1A protein (FOLD). This reporter cell was incubated with serial dilutions of human TL1A protein (Cat.No.TLA-H5243). The max induction fold was approximately 40.12.

• *Application*

Anti-human TL1A Neutralizing Antibody Screening

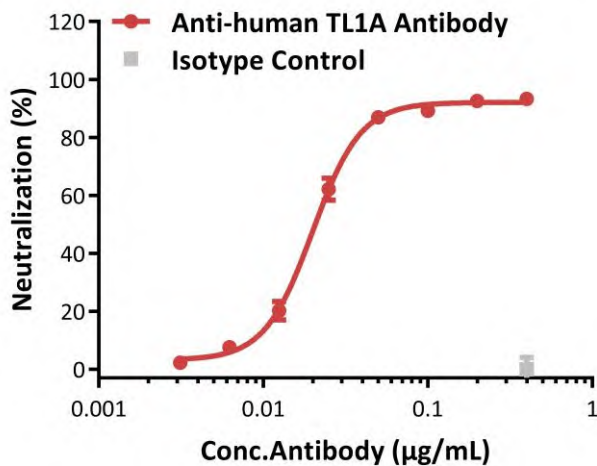


Fig3. Inhibition of human TL1A protein-induced reporter activity. This reporter cell was incubated with serial dilutions of antibodies in the presence of human TL1A protein (Cat.No.TLA-H5243) with a final concentration of 0.02 µg/mL. The EC50 of anti-human TL1A neutralizing antibody is approximately 0.020 µg/mL.

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• *Related Products*

Products

Human TL1A / TNFSF15 Protein, His Tag (MALS verified)
HEK293/Human TL1A Stable Cell Line

Cat.No.

TLA-H5243
CHEK-ATP142