Human DR3 (TL1A receptor) (Luc) Jurkat Reporter Cell

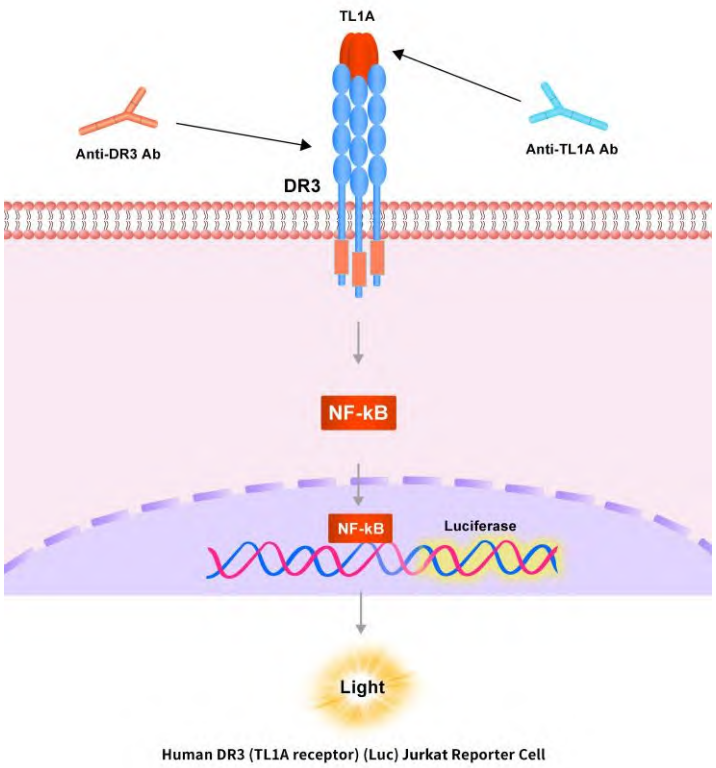
Catalog No.	Size
SCJUR-STF178	2 × (1 vial contains ~5×10^6 cells)

• *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.



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

• *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)
- Penicillin-Streptomycin (Gibco, Cat. No. 15140-122)
- Complete Growth Medium: RPMI-1640 + 10% FBS, 1%P/S
- Culture Medium: RPMI-1640 + 10% FBS, Hygromycin (20 μg/mL), 1%P/S
- 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)

• *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℃ 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)
- **Note**: After recovery for 1-2 generations with the complete growth medium not containing the selection marker, if the cell state is well, changing to the culture medium containing the selection marker.

• *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***

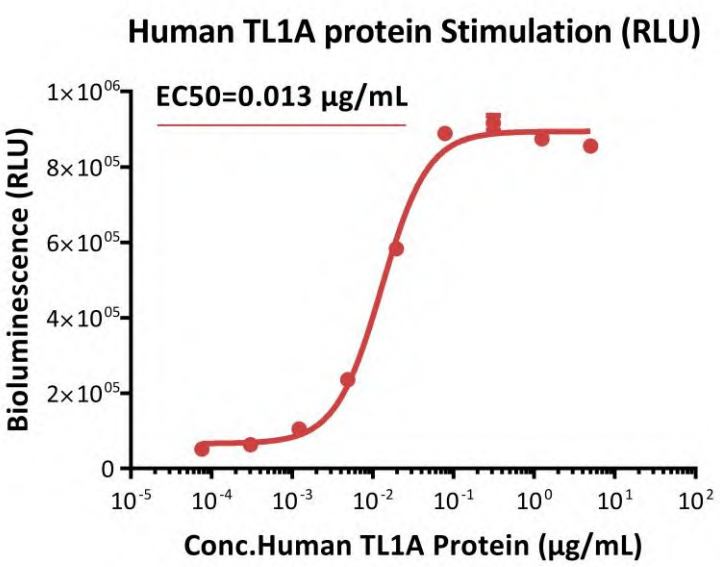


Fig1. Response to human TL1A protein (RLU). This reporter cell was incubated with serial dilutions of human TL1A protein (Cat. No. TLA-H5243). The EC50 was approximately 0.013 μg/mL.

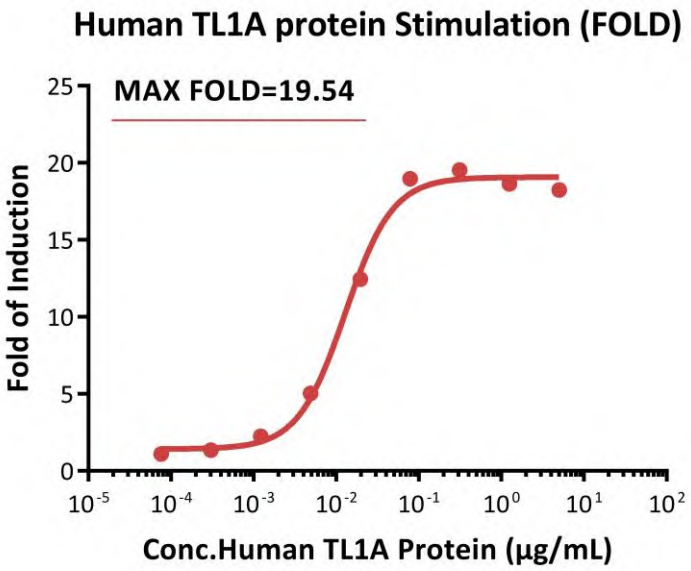


Fig2. Response to human TL1A protein (FOLD). This reporter cell was incubated with serial dilutions of human TL1A protein (Cat. No. TLA-H5243). The max induction fold was approximately 19.54.

• *Application*

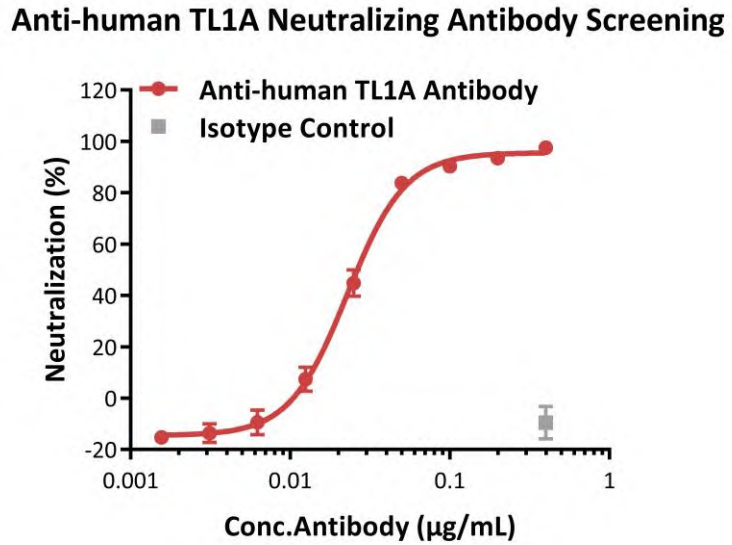
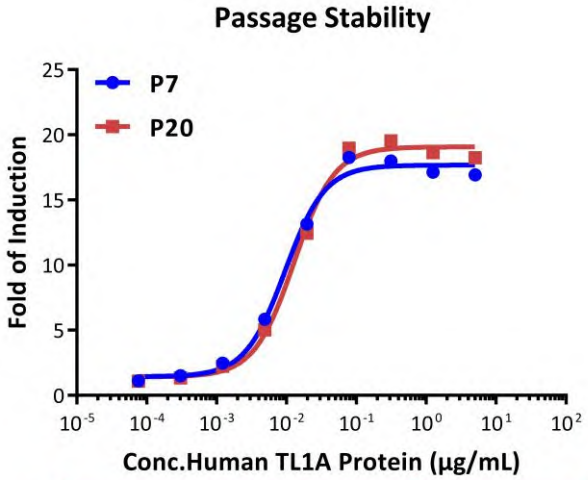


Fig3. Inhibition of human TL1A protein-induced reporter activity. This reporter cell was incubated with serial dilutions of antibodies in the presence of human TL1A protein (Cat. No. TLA-H5243) with a final concentration of 0.02 μg/mL. The EC50 of anti-human TL1A neutralizing antibody is approximately 0.023 μg/mL.

• *Passage Stability*



	P7	P20
EC50 (μg/mL)	0.0096	0.013
Max Fold	18.25	19.54

Fig4. Passage stability analysis by Signaling Bioassay. The continuously growing Human DR3 (TL1A receptor) (Luc) Jurkat Reporter Cell was stimulated with serial dilutions of human TL1A protein (Cat. No. TLA-H5243). Human TL1A protein stimulated response demonstrates passage stabilization (fold induction and EC50) across passage 7-20.

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• *License Disclosure*

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• *Related Products*

Products	Cat. No.
Human TL1A / TNFSF15 Protein, His Tag (MALS verified)	TLA-H5243
HEK293/Human TL1A Stable Cell Line	CHEK-ATP142