NF-kB (Luc) Jurkat Reporter Cell Development Service Data Sheet

NF-kB (Luc) Jurkat Reporter Cell

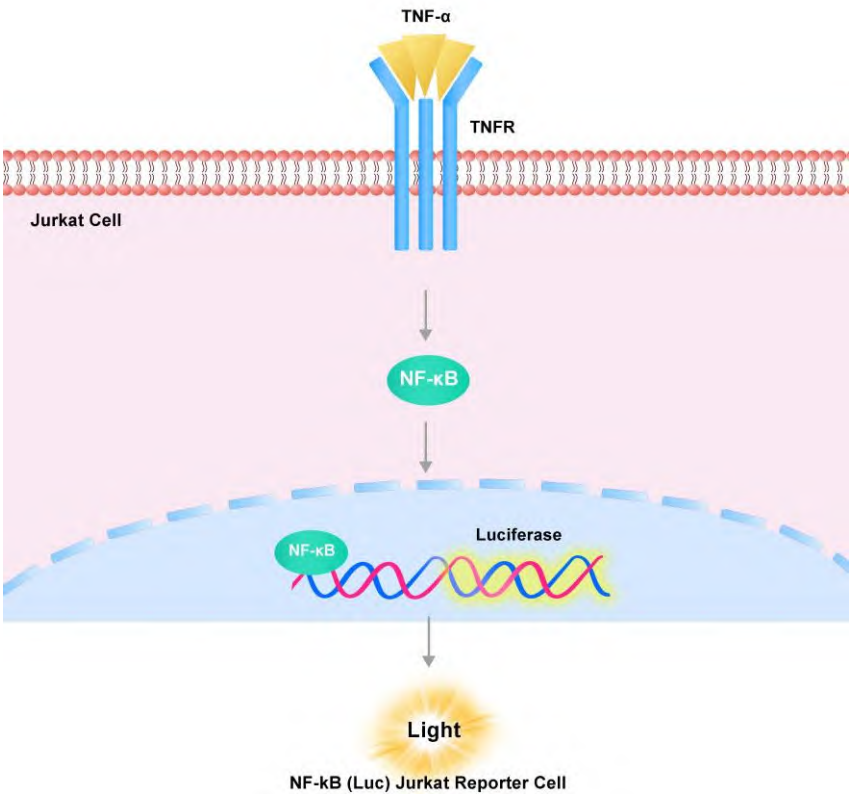
Catalog No.	Size
SCJUR-STF113	2 × (1 vial contains ~5×10^6 cells)

• *Description*

The NF-kB (Luc) Jurkat Reporter Cell was engineered with the NF-kB response element driving luciferase expressing systems. The receptors expressing endogenously or transfected on this reporter cell were activated by corresponding ligands binding, transducing intracellular signals resulting in NF-kB-RE mediated luminescence.

• *Application*

- The discovery of activators or inhibitors by the NF-kB signaling bioactivity
- Transfection host for some receptors concerning the NF-kB signaling pathway



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• *Cell Line Profile*

Cell line	NF-kB (Luc) Jurkat Reporter Cell
Host Cell	Jurkat
Property	Suspension
Complete Growth Medium	RPMI-1640 + 10% FBS
Selection Marker	NA
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)
- Complete Growth Medium: RPMI-1640 + 10% FBS
- 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 complete growth medium or replacement of complete growth 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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• *Signaling Bioassay*

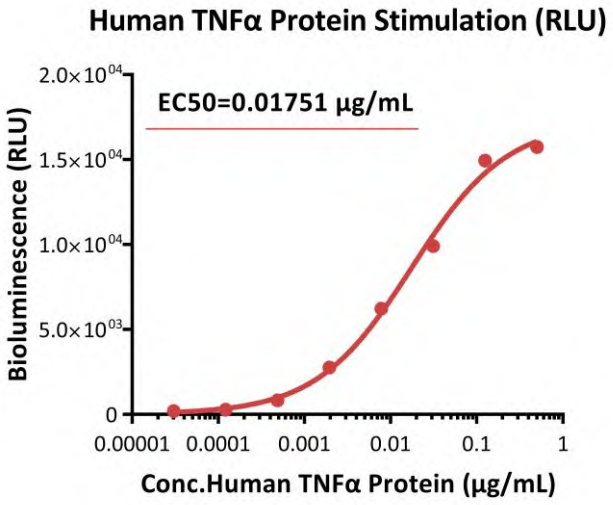

Fig1. Response to human TNFα protein (RLU). The NF-kB (Luc) Jurkat Reporter Cell was stimulated with serial dilutions of human TNFα protein (AcroBiosystems, Cat.No.TNA-H4211). The EC50 was approximately 0.01751 μg/mL.

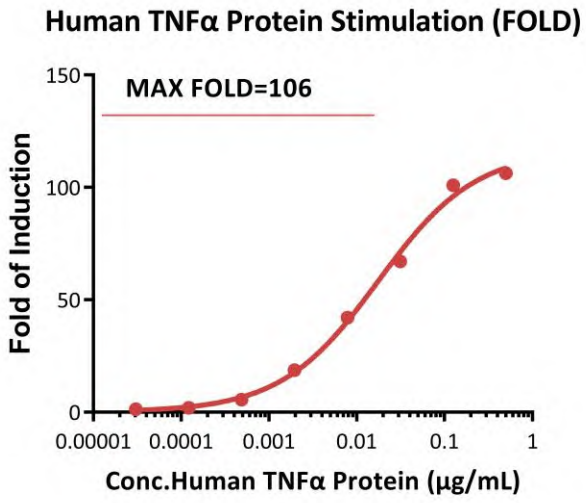

Fig2. Response to human TNFα protein (FOLD). The NF-kB (Luc) Jurkat Reporter Cell was stimulated with serial dilutions of human TNFα protein (AcroBiosystems, Cat.No.TNA-H4211). The max induction fold was approximately 106.

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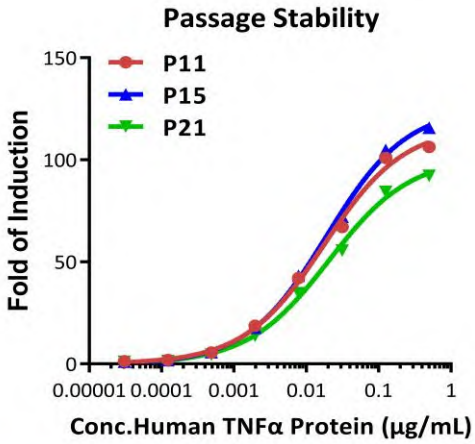
• *Passage Stability*



	P11	P15	P21
EC50 (μg/mL)	0.01751	0.01915	0.02052
Max Fold	106	116	92

Fig4. Passage stability analysis by Signaling Bioassay. The continuously growing NF-kB (Luc) Jurkat Reporter Cell was stimulated with serial dilutions of human TNFα protein (AcroBiosystems, Cat.No.TNA-H4211). Human TNFα protein stimulated response demonstrates passage stabilization (fold induction and EC50) across passage 11-21.

• *License Disclosure*

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• *Related Products*

Products	**Cat.No.**
Human TNF-alpha Protein, premium grade	TNA-H4211