

# Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell Data Sheet

## Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell

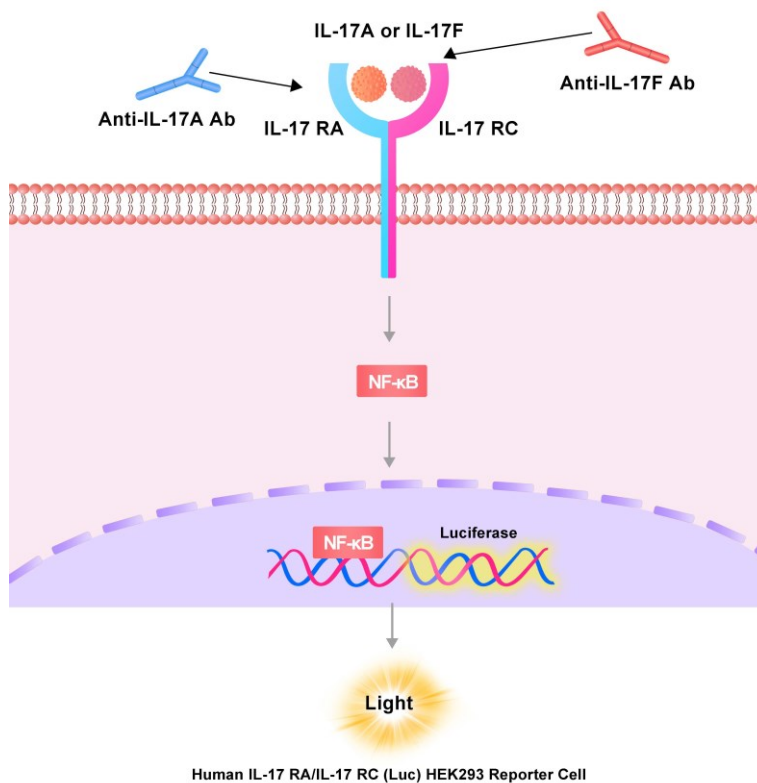
Catalog No.	Size
CHEK-ATF133	2 × (1 vial contains ~5×10 <sup>6</sup> cells)

### • Description

The Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell was engineered to express NF-κB signaling response element driving luciferase expressing systems. When stimulated with human IL-17A or human IL-17F protein, receptor-mediated signaling can drive NF-κB-mediated luminescence. Neutralization of biological effect of human IL-17A or human IL-17F protein by corresponding antibody results in a decrease in luminescence.

### • Application

- Screen for neutralizing antibodies blocking the stimulation of human IL-17A or human IL-17F protein.



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## • Cell Line Profile

Cell line	Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell
Host Cell	HEK293
Property	Adherent
Complete Growth Medium	DMEM + 10% FBS
Selection Marker	Puromycin (2 µg/mL) + Zeocin (20 µg/mL)
Incubation	37°C with 5% CO <sub>2</sub>
Doubling Time	22-24 hours
Transduction Technique	Lentivirus

## • Materials Required for Cell Culture

- DMEM medium (Gibco, Cat.No.11965-092)
- Fetal bovine serum (CellMax, Cat.No.SA211.02)
- Puromycin (InvivoGen, Cat.No.ant-pr-5b)
- Zeocin (Invitrogen, Cat.No.R25001)
- Complete Growth Medium: DMEM + 10% FBS
- Culture Medium: DMEM + 10% FBS, Puromycin (2 µg/mL), Zeocin (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<sub>2</sub> 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 2 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 and spin at approximately 1000 rpm for 5 minutes.
4. Resuspend cell pellet with 5 mL complete growth medium and transfer the cell suspension into T-75 flask containing 10-15 mL of pre-warmed complete growth medium.
5. Incubate at 37°C with 5% CO<sub>2</sub> incubator until the cells are ready to be split.

## • *Subculture*

1. Remove and discard culture medium.
2. Wash the cells once with sterile PBS.
3. Add 2 mL of 0.25% trypsin to cell culture flask. Place the flask at 37°C for 2-3 minutes, until 90% of the cells have detached.
4. Add 6.0 to 8.0 mL of culture medium and aspirate cells by gently pipetting.
5. Add appropriate aliquots of the cell suspension to new culture vessel.
6. Incubate at 37°C with 5% CO<sub>2</sub> incubator.

**Subcultivation Ratio:** A subcultivation ratio of 1:6 to 1:10 is recommended.

**Medium Renewal:** Every 2 to 3 days.

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## • *Cryopreservation*

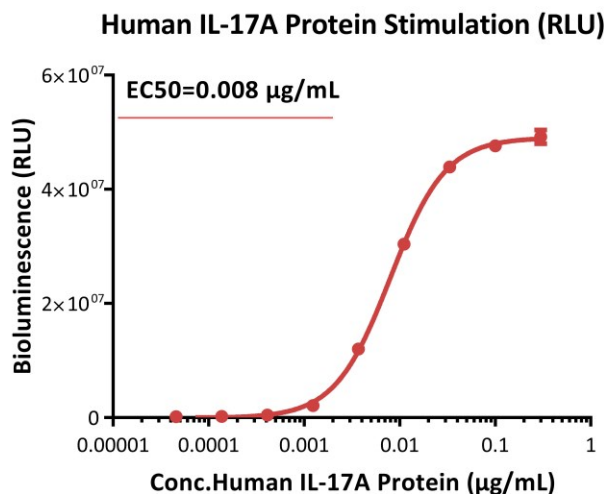
1. Remove and discard spent medium.
2. Detach cells from the cell culture flasks with 0.25% trypsin.
3. Centrifuge at 1000 rpm for 5 min at RT to pellet cells.
4. Resuspend the cell pellets with complete growth medium and count viable cells.
5. Centrifuge at 1000 rpm for 5 min at RT and resuspend cells in freezing medium to a concentration of  $5 \times 10^6$  to  $1 \times 10^7$  cells/mL.
6. Aliquot into cryogenic storage vials. Place vials in a programmable cooler or an insulated box placed in a  $-80^\circ\text{C}$  freezer overnight, then transferring to liquid nitrogen storage.

## • *Storage*

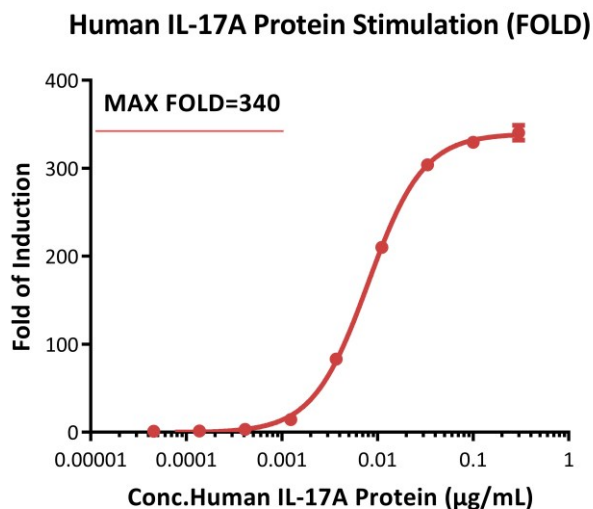
- **Product format:** Frozen
- **Storage conditions:** Liquid nitrogen immediately upon receipt

# Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell Data Sheet

## • Signaling Bioassay

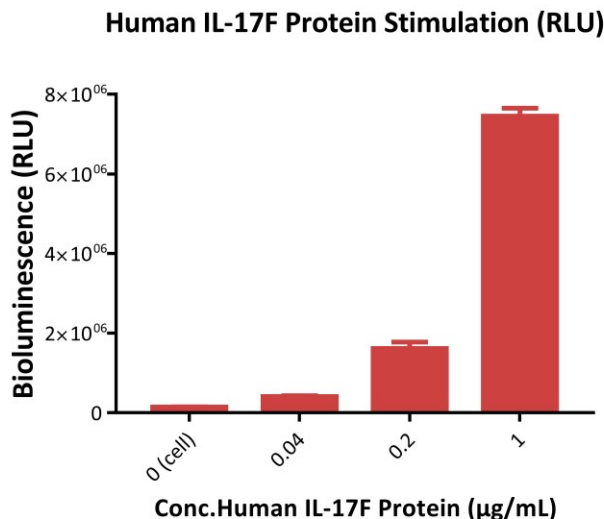


**Fig1. Response to human IL-17A protein (RLU).** The Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-17A protein (Cat.No.ILA-H5219). The EC50 was approximately 0.008 µg/mL.

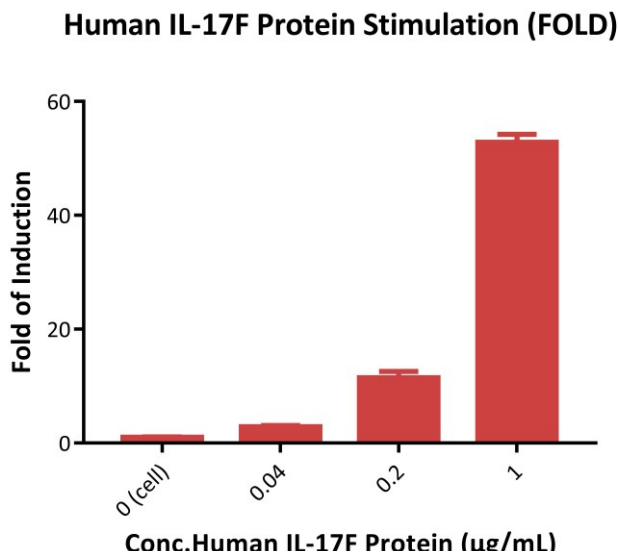


**Fig2. Response to human IL-17A protein (FOLD).** The Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-17A protein (Cat.No.ILA-H5219). The max induction fold was approximately 340.

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**Fig3. Response to human IL-17F protein (RLU).** The Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-17F protein (Cat.No.ILF-H5244). The max induction fold was approximately 52.82.

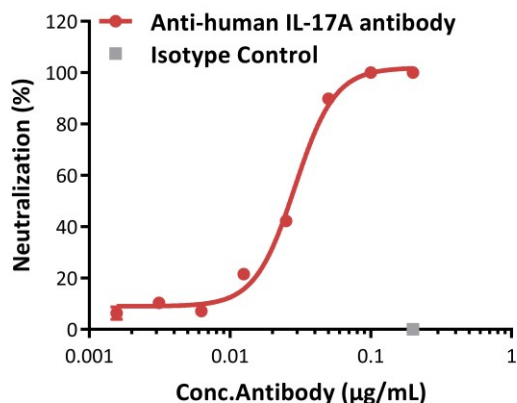


**Fig4. Response to human IL-17F protein (FOLD).** The Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-17F protein (Cat.No.ILF-H5244). The max induction fold was approximately 52.82.

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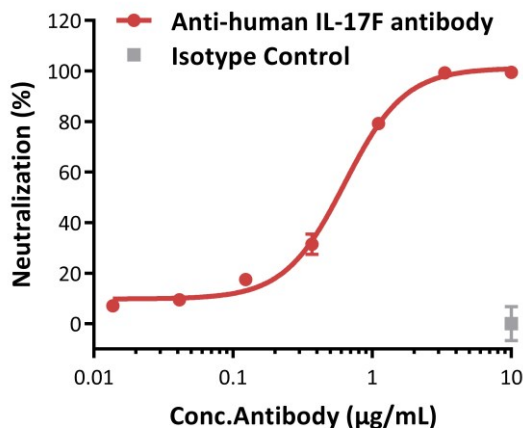
## • Application

### Anti-human IL-17A Neutralizing Antibody Screening



**Fig5. Inhibition of human IL-17A protein-induced reporter activity by anti-human IL-17A neutralizing antibody.** This reporter cell was incubated with serial dilutions of antibodies in the presence of human IL-17A protein (Cat.No.ILA-H5219) with a final concentration of 0.01 µg/mL. The EC50 of anti-human IL-17A neutralizing antibody (Bimekizumab) is approximately 0.02893 µg/mL.

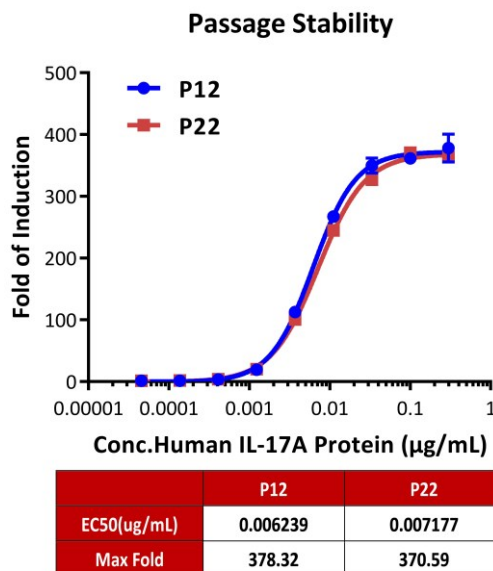
### Anti-human IL-17F Neutralizing Antibody Screening



**Fig6. Inhibition of human IL-17F protein-induced reporter activity by anti-human IL-17F neutralizing antibody.** This reporter cell was incubated with serial dilutions of antibodies in the presence of human IL-17F protein (Cat.No.ILF-H5244) with a final concentration of 0.5 µg/mL. The EC50 of anti-human IL-17F neutralizing antibody (Bimekizumab) is approximately 0.6346 µg/mL.

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### • Passage Stability



**Fig7. Passage stability analysis by Signaling Bioassay.** The continuously growing Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-17A protein. Human IL-17A protein stimulated response demonstrates passage stabilization (fold induction and EC50) across passage 12-22.

### • License Disclosure

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### • Related Products

#### Products

Human IL17A Protein, premium grade

Human IL17F Protein, His Tag

#### Cat.No.

ILA-H5219

ILF-H5244