Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell Data Sheet

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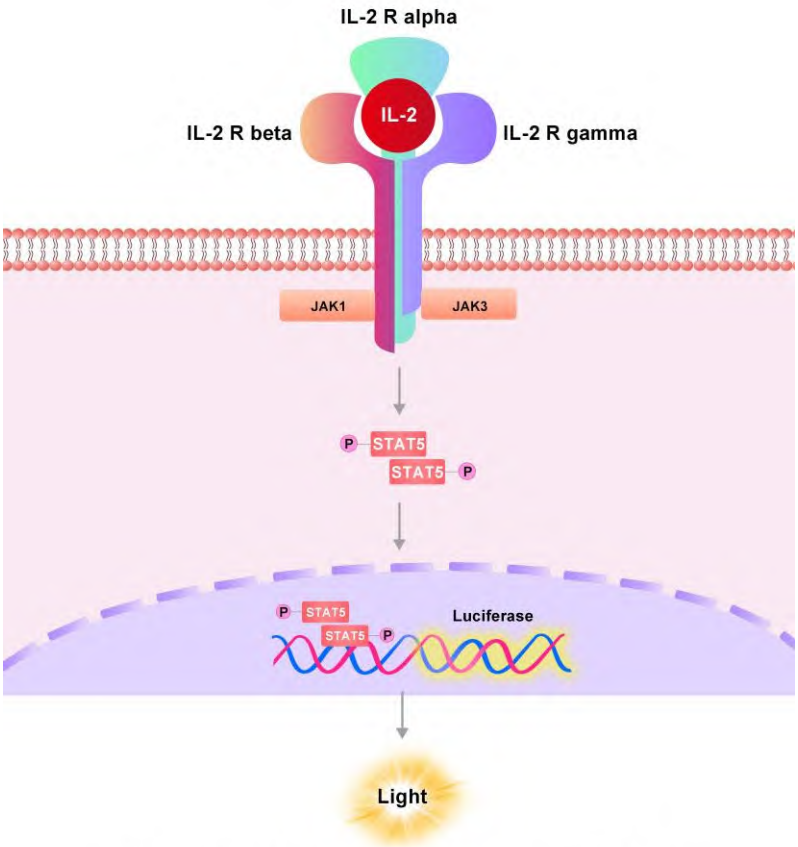
Catalog No.	Size
CHEK-ATF201	2 × (1 vial contains ~5×10^6 cells)

• *Description*

The Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell was engineered to not only express STAT5 signaling response element, but also express the receptors full length human IL-2 R alpha (Gene ID: 3559), IL-2 R beta (Gene ID: 3560) and IL-2 R gamma (Gene ID: 3561). When stimulated with human IL-2 protein, receptor-mediate signaling drives STAT5-mediated luminescence.

• *Application*

- Bioactivity detection of human IL-2 fusion protein
- Bioactivity detection of human IL-15 fusion protein



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• *Cell Line Profile*

Cell line	Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (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) + G418 (200 μg/mL) + Hygromycin B (20 μg/mL)
Incubation	37°C with 5% CO_2
Doubling Time	22-24 hours
Transduction Technique	Lentivirus

• *Materials Required for Cell Culture*

- DMEM Medium (BasalMedia, Cat. No. L120KJ)

  Note: If you are unable to obtain the specified DMEM medium (BasalMedia, Cat. No. L120KJ) in China, you may use an alternative DMEM medium (Gibco, Cat. No. 11965-092) or another suitable medium for culturing.
- Fetal bovine serum (CellMax, Cat. No. SA211.02)
- Puromycin (InvivoGen, Cat. No. ant-pr-5b)
- Zeocin (Invitrogen, Cat. No. R25001)
- G418 (InvivoGen, Cat. No. ant-gn-5)
- Hygromycin B (Invitrogen, Cat. No. 10687010)
- 0.25% Trypsin-EDTA (1X), Phenol Red (Gibco, Cat. No. 25200-056)
- Penicillin-Streptomycin (Gibco, Cat. No. 15140-122)
- Phosphate Buffered Saline (1X) (HyClone, Cat. No. SH30256.01)
- Complete Growth Medium: DMEM + 10% FBS, 1%P/S
- Culture Medium: DMEM + 10% FBS, Puromycin (2 μg/mL), Zeocin (20 μg/mL), G418 (200 μg/mL), Hygromycin B (20 μg/mL), 1%P/S
- Freeze Medium: 90% FBS, 10% (V/V) DMSO
- T-75 Culture flask (Corning, Cat. No. 430641)
- Cryogenic storage vials (SARSTEDT, Cat. No. 72.379.007)
- Thermostat water bath
- Centrifuge (Cence, Model: L550)
- Cell counter (MONWEI, Model: SmartCell200A Plus)
- CO_2 Incubator (Thermo, Model: 3111)
- Biological Safety Cabinet (Thermo, Model: 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℃ with 5% CO_2 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℃ 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℃ with 5% CO_2 incubator.

Subcultivation Ratio: A subcultivation ratio of 1:3 to 1:5 is recommended.

Medium Renewal: Every 2 to 3 days.

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. 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 5×10^6 to 1×10^7 cells/mL.
6. 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***

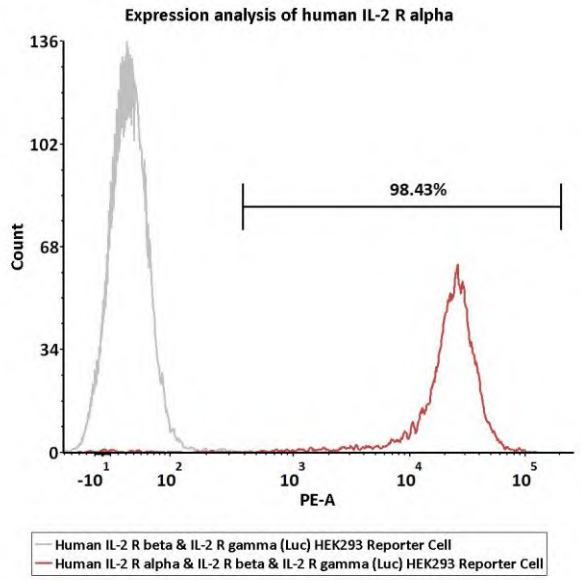

Fig1. Co-expression analysis of human IL-2 R beta on Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell by FACS. Cell surface staining was performed on Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell or negative control cell using PE-labeled anti- IL-2 R alpha antibody.

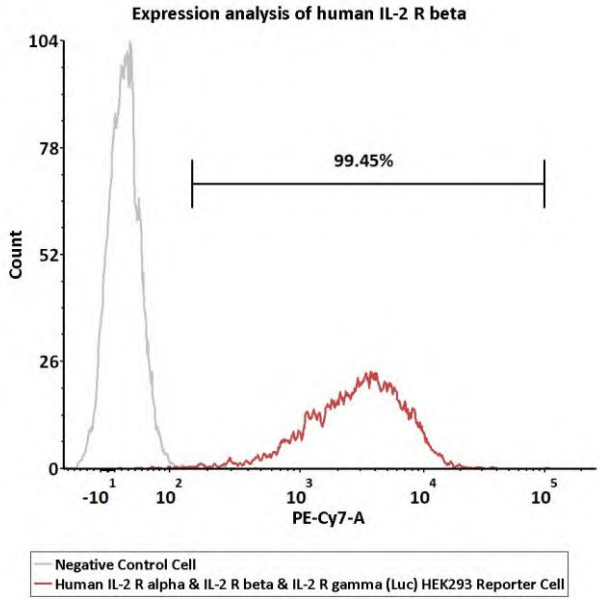

Fig2. Co-expression analysis of human IL-2 R gamma on Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell by FACS. Cell surface staining was performed on Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell or negative control cell using PE-labeled anti-IL-2 R beta antibody.

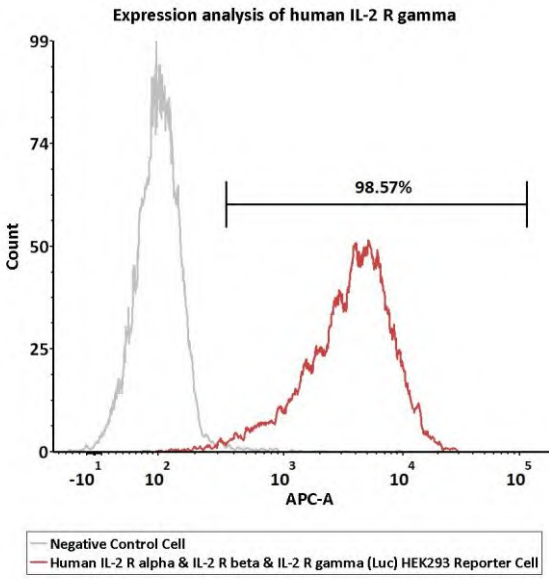

Fig3. Co-expression analysis of human IL-2 R alpha on Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell by FACS. Cell surface staining was performed on Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell or negative control cell using APC-labeled anti-IL-2 R gamma antibody.

- ***Signaling Bioassay***

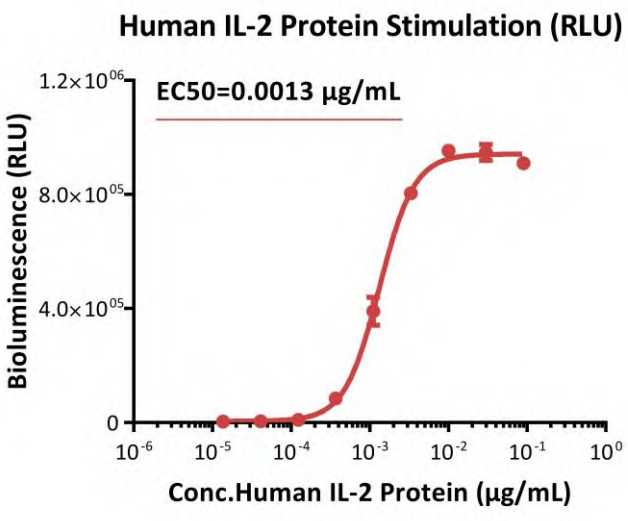

Fig4. Response to human IL-2 protein (RLU). The Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-2 protein (Cat. No. IL2-H5215). The EC50 was approximately 0.0013 μg/mL.

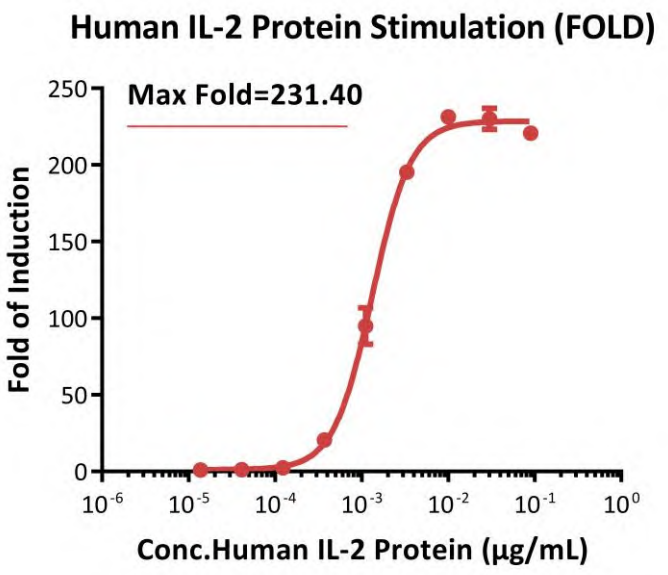

Fig5. Response to human IL-2 protein (FOLD). The Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell was stimulated with serial dilutions of human IL-2 protein (Cat. No. IL2-H5215). The max induction fold was approximately 231.40.

Human IL-2 R alpha & IL-2 R beta & IL-2 R gamma (Luc) HEK293 Reporter Cell Data Sheet

• *Related Products*

Products	Cat. No.
Human IL-2 Protein, premium grade	IL2-H5215
Human IL-2 R beta/IL-2 R gamma (Luc) HEK293 Reporter Cell	CHEK-ATF136
Human IL-23 R/IL-12 R beta 1(Luc) HEK293 Reporter Cell	CHEK-ATF166
Human IL-22 R alpha 1/IL-10 R beta (Luc) HEK293 Reporter Cell	CHEK-ATF167
Human IL-17 RA/IL-17 RC (Luc) HEK293 Reporter Cell	CHEK-ATF133
Human IL-11 R alpha (Luc) HEK293 Reporter Cell	CHEK-ATF052
Human IL-4 R alpha/IL-13 R alpha 1 (Luc) HEK293 Reporter Cell	CHEK-ATF075
Human IL-21 R/CD132 (Luc) HEK293 Reporter Cell	CHEK-ATF051
Human IL-31 RA/OSMR (Luc) HEK293 Reporter Cell	CHEK-ATF094
Human IL-10 R alpha/IL-10 R beta (Luc) HEK293 Reporter Cell	CHEK-ATF095
Human IL-7 R alpha/CD132 (Luc) HEK293 Reporter Cell	CHEK-ATF099
Human IL-5 R alpha/CD131 (Luc) HEK293 Reporter Cell	CHEK-ATF074
Human IGF-1 R (Luc) HEK293 Reporter Cell	CHEK-ATF107
NIH-3T3/Human IGF-1 R Stable Cell Line Development Service	CNIH-ATP102
Human CD40 (Luc) HEK293 Reporter Cell	CHEK-ATF097
HEK293/Human OX40 / TNFRSF4 / CD134 Stable Cell Line	CHEK-ATP053
HEK293/Human OX40 Ligand / TNFSF4 Stable Cell Line	CHEK-ATP054
Human OX40 (Luc) HEK293 Reporter Cell	CHEK-ATF135
HEK293/Human CD40 Ligand / TNFSF5 Stable Cell Line	CHEK-ATP041
HEK293/Human FcRn (FCGRT & B2M) Stable Cell Line	CHEK-ATP079
Raji/Membrane-Bound human TL1A Stable Cell Line	SCRAJ-STT204
HEK293/Membrane-Bound human TL1A Stable Cell Line	CHEK-ATP198
HEK293/Human TL1A Stable Cell Line	CHEK-ATP142
Human DR3 (TL1A receptor) (Luc) Jurkat Reporter Cell Development Service	SCJUR-STF178
HEK293/Human HVEM Stable Cell Line	CHEK-ATP147

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• *Related Products*

Products	Cat. No.
Human TSLP R (Luc) HEK293 Reporter Cell	CHEK-ATF045
STAT3 (Luc) HEK293 Reporter Cell	CHEK-ATF047
Human HVEM (Luc) HEK293 Reporter Cell	CHEK-ATF105
Human BTLA (Luc) Jurkat Reporter Cell Development Service	SCJUR-STF106
Raji/Human HVEM Stable Cell Line Development Service	SCRAJ-STF108
CHO/Human LIGHT Stable Cell Line Development Service	SCCHO-ATP109
CHO/Human BTLA Stable Cell Line Development Service	SCCHO-ATP110
CHO/Human TSHR Stable Cell Line Development Service	SCCHO-ATP085
CHO/Human LILRB4 Stable Cell Line Development Service	SCCHO-ATP087
Human GLP-2R (Luc) HEK293 Reporter Cell	CHEK-ATF128
Human RANK (Luc) HEK293 Reporter Cell	CHEK-ATF129
HEK293/FcRn (FCGRT & B2M), GFP Tag Stable Cell Line	CHEK-ATP132
HEK293/Human TSHR Stable Cell Line	CHEK-ATP086
HEK293/Human LILRB4 Stable Cell Line	CHEK-ATP088
Human TSHR (Luc) HEK293 Reporter Cell	CHEK-ATF187
Human PTH1R (Luc) HEK293 Reporter Cell	CHEK-ATF194
Human TACI (Luc) HEK293 Reporter Cell	CHEK-ATF197