

CHO/Human ActRIIA Stable Cell Line Data Sheet

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CHO/Human ActRIIA Stable Cell Line Data Sheet

CHO/Human ActRIIA Stable Cell Line

Catalog No.	Size
CCHO-ATP316	2 × (1 vial contains ~5×10 ⁶ cells)

• *Description*

The CHO/Human ActRIIA Stable Cell Line was engineered to express the full length human ActRIIA (Uniprot: P27037-1). Surface expression of the ActRIIA was confirmed by flow cytometry.

• *Application*

- Useful for cell-based ActRIIA binding assay

• *Cell Line Profile*

Cell line	CHO/Human ActRIIA Stable Cell Line
Host Cell	CHO
Property	Adherent
Complete Growth Medium	F-12K + 10% FBS
Selection Marker	Puromycin (2 µg/mL)
Incubation	37°C with 5% CO ₂
Doubling Time	22-24 hours
Transduction Technique	Lentivirus

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• *Materials Required for Cell Culture*

- F-12K Nutrient Mixture (BasalMedia, Cat. No. L450KJ)

Note: If you are unable to obtain the specified F-12K Nutrient Mixture (BasalMedia, Cat. No. L450KJ), you may use an alternative F-12K Nutrient Mixture (Gibco, Cat. No. 21127-022) or another suitable medium for culturing.

- Fetal bovine serum (CellMax, Cat. No. SA211.02)
- Puromycin (InvivoGen, Cat. No. ant-pr-5b)

Note: For selection antibiotics, we highly recommend using the specified brand. The activity of antibiotics may vary between manufacturers, so if you choose to use a different brand, it is essential to validate whether the concentration recommended in the culture medium is suitable. Regardless of the brand used, we recommend maintaining a backup culture without selection antibiotics to avoid potential cell loss due to inappropriate antibiotic concentration.

- 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: F-12K + 10% FBS, 1%P/S
- Culture Medium: F-12K + 10% FBS, Puromycin (2 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)
- CO₂ Incubator (Thermo, Model: 3111)
- Biological Safety Cabinet (Thermo, Model: 1389)

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• *Recovery*

1. Thaw the vial by gently agitating it in a 37°C water bath. To minimize the risk of contamination, ensure the cap remains out of the water. Thawing should be completed quickly, typically within 3-5 minutes.
2. After thawing, promptly remove the vial from the water bath and decontaminate it by spraying with 70% ethanol. From this point onward, all operations must be performed under strict aseptic conditions.
3. Transfer the contents of the vial to a centrifuge tube containing 4.0 mL of complete growth medium. Centrifuge at approximately 1000 rpm for 5 minutes.
4. Resuspend the cell pellet with 5 mL **complete growth medium** and transfer the cell suspension into a T-75 flask containing 10-15 mL of pre-warmed **complete growth medium**.
5. Incubate at 37°C with 5% CO₂ incubator until the cells are ready to be split.

• *Subculture*

1. Cell viability may be low after thawing, and full recovery may take up to a week. Monitor the cells daily until the culture reaches 80-90% confluency. At this point, remove and discard the spent medium. Avoid allowing the cells to become over-confluent to ensure optimal cell health.
2. Wash the cells once with sterile PBS. Avoid adding PBS directly onto the cell surface.
3. Add 3 mL of 0.25% Trypsin-EDTA to the T-75 flask. Place the flask at 37°C for 5-7 minutes, until 90% of the cells have detached. Monitor under a microscope to avoid over-trypsinization.
4. Add 6.0 to 8.0 mL of **culture medium** using a pipette and gently rinse the cells from the surface of the T-75 flask. Gently pipette up and down several times to achieve a single cell suspension without cell clumps.
5. Transfer appropriate aliquots of the cell suspension to a new T-75 flask. A subcultivation ratio of 1:6 to 1:10 is recommended. Adjust the ratio based on your specific culture system.
6. Incubate at 37°C with 5% CO₂ incubator.
7. When the cell culture reaches 80-90% confluency, proceed to the next subculture. Avoid over-confluency, as this may negatively impact cell performance in subsequent passages.

Note: After recovery, maintain the cells for 1-2 passages in the complete growth medium not containing the selection marker, if the cells are in good condition, transition to the culture medium containing the selection marker during subculturing.

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• *Cryopreservation*

1. When the cell culture reaches 80-90% confluency, remove and discard the spent medium.
2. Wash the cells once with sterile PBS. Avoid adding PBS directly onto the cell surface.
3. Add 3 mL of 0.25% Trypsin-EDTA to the T-75 flask. Place the flask at 37°C for 5-7 minutes, until 90% of the cells have detached. Monitor under a microscope to avoid over-trypsinization.
4. Add 6.0 to 8.0 mL of complete growth medium using a pipette and gently rinse the cells from the surface of the T-75 flask. Gently pipette up and down several times to achieve a single cell suspension without cell clumps. Count the viable cells.
5. Transfer the cell suspension to a centrifuge tube. Centrifuge at 1000 rpm for 5 min at room temperature to pellet the cells.
6. After centrifugation, discard the supernatant. Resuspend the cells in ice cold freezing medium to a concentration of 5×10^6 to 1×10^7 cells/mL.
7. Aliquot the cell suspension into cryogenic storage vials. Place the vials in a programmable cooler or an insulated box placed in a -80°C freezer overnight, then transfer to liquid nitrogen storage for long-term storage.

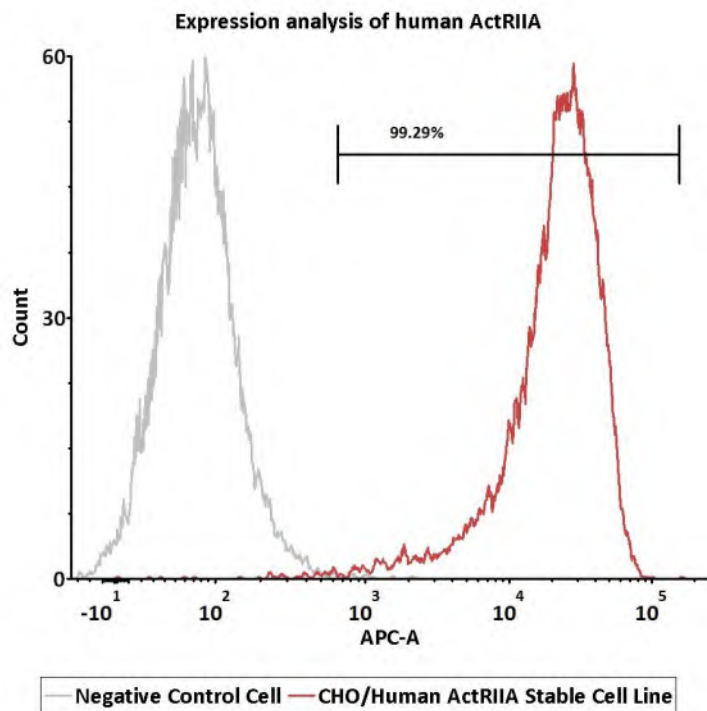
Note: It is recommended to establish a cell bank at the earliest possible passage for long-term use.

• *Storage Condition*

Cells must be received in a frozen state on dry ice and should be transferred to liquid nitrogen or a -80°C freezer immediately upon receipt. If stored in a -80°C freezer, it is recommended to limit the storage period to no more than two weeks. For long-term preservation, transfer the cells to liquid nitrogen is highly recommended.

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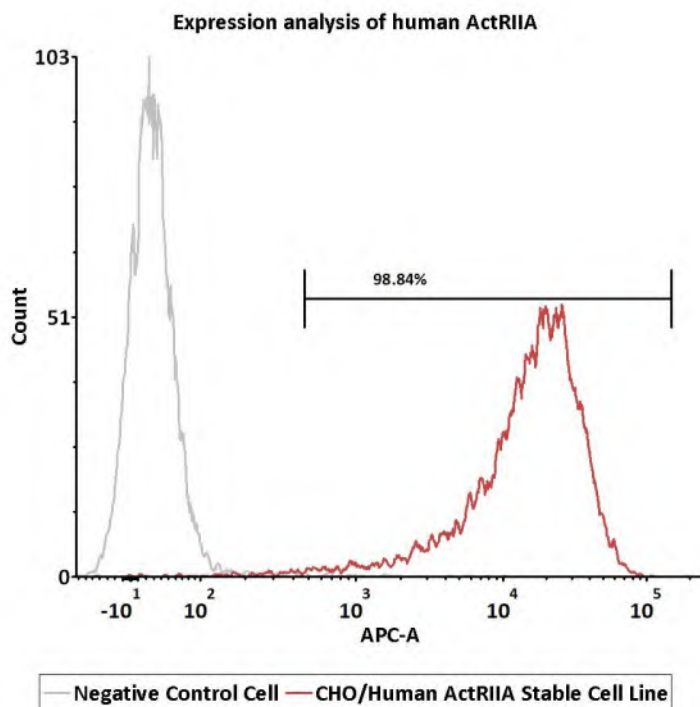
• Receptor Assay



Catalog No.	Stable Cell Line	MFI for ActRIIA (APC)
NA	Negative Control Cell	71.56
CCHO-ATP316	CHO/Human ActRIIA Stable Cell Line	22571.32

Fig1. Expression analysis of human ActRIIA on CHO/Human ActRIIA Stable Cell Line by FACS. Cell surface staining was performed on CHO/Human ActRIIA Stable Cell Line or negative control cell using anti-human ActRIIA & ActRIIB antibody (Bimagrumab) followed by staining with APC anti-human IgG Fc antibody.

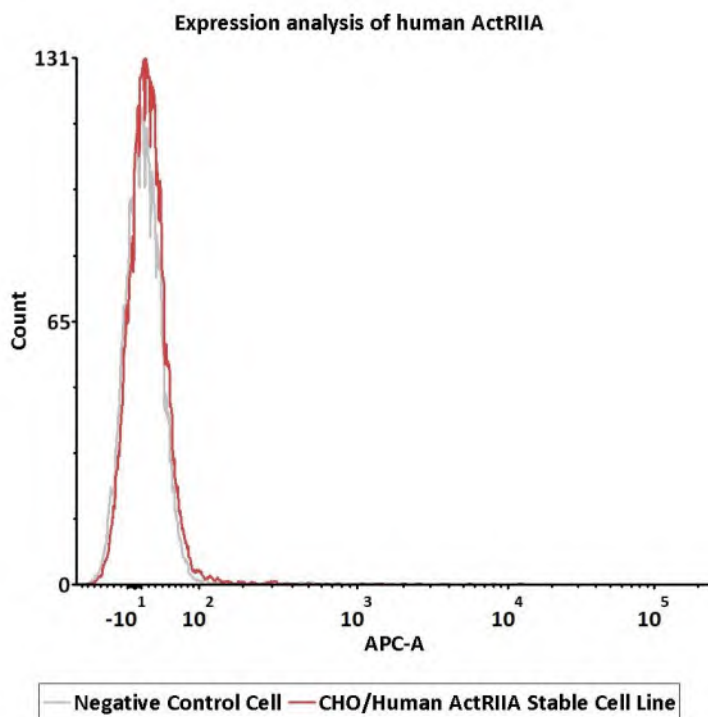
CHO/Human ActRIIA Stable Cell Line Data Sheet



Catalog No.	Stable Cell Line	MFI for ActRIIA (APC)
NA	Negative Control Cell	24.12
CCHO-ATP316	CHO/Human ActRIIA Stable Cell Line	16552.78

Fig2. Expression analysis of human ActRIIA on CHO/Human ActRIIA Stable Cell Line by FACS. Cell surface staining was performed on CHO/Human ActRIIA Stable Cell Line or negative control cell using anti-human ActRIIA antibody followed by staining with APC anti-human IgG Fc antibody.

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Catalog No.	Stable Cell Line	MFI for ActRIIA (APC)
NA	Negative Control Cell	9.65
CCHO-ATP316	CHO/Human ActRIIA Stable Cell Line	14.47

Fig3. Expression analysis of human ActRIIA on CHO/Human ActRIIA Stable Cell Line by FACS. Cell surface staining was performed on CHO/Human ActRIIA Stable Cell Line or negative control cell using anti-human ActRIIB antibody followed by staining with APC anti-human IgG Fc antibody, which showed no binding to the human ActRIIA.

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• *Related Products*

Products

Cat. No.

HEK293/Human PD-L1, GFP Tag Stable Cell Line	CHEK-ATP002
HEK293/hClaudin-18.2 Cell Line	CHEK-ATP033
HEK293/hGPRC5D Cell Line	CHEK-STP042
HEK293/Human TROP-2 Stable Cell Line	CHEK-ATP036
HEK293/Human Nectin-4 Stable Cell Line	CHEK-ATP035
HEK293/Human CCR5 Stable Cell Line	CHEK-ATP043
HEK293/Human CD40 Ligand / TNFSF5 Stable Cell Line	CHEK-ATP041
HEK293/Human SIRP alpha Stable Cell Line	CHEK-ATP051
HEK293/Human 4-1BB Ligand / TNFSF9 Stable Cell Line	CHEK-ATP039
HEK293/Human CD20 Stable Cell Line	CHEK-ATP034
HEK293/Human OX40 / TNFRSF4 / CD134 Stable Cell Line	CHEK-ATP053
HEK293/Human OX40 Ligand / TNFSF4 Stable Cell Line	CHEK-ATP054
HEK293/Human 4-1BB / TNFRSF9 Stable Cell Line	CHEK-ATP038
HEK293/Human Anti-CD19 Stable Cell Line	CHEK-ATS056
Raji/Human PD-L1 Stable Cell Line	SCRAJ-STT075
Raji/Human CD155 Stable Cell Line	SCRAJ-STT076
CHO/Human CD16a (158V) Stable Cell Line (Low Expression)	SCCHO-ATP059L
CHO/Human CD16a (158V) Stable Cell Line (Medium Expression)	SCCHO-ATP059M
CHO/Human CD16a (158V) Stable Cell Line (High Expression)	SCCHO-ATP059H
CHO/Human CD32b Stable Cell Line (Low Expression)	SCCHO-ATP060L
CHO/Human CD32b Stable Cell Line (Medium Expression)	SCCHO-ATP060M
CHO/Human CD32b Stable Cell Line (High Expression)	SCCHO-ATP060H
CHO/Human CD32a Stable Cell Line (Low Expression)	SCCHO-ATP061L
CHO/Human CD32a Stable Cell Line (Medium Expression)	SCCHO-ATP061M
CHO/Human CD32a Stable Cell Line (High Expression)	SCCHO-ATP061H
CHO/Human CD64 Stable Cell Line (Low Expression)	SCCHO-ATP062L
CHO/Human CD64 Stable Cell Line (Medium Expression)	SCCHO-ATP062M
CHO/Human CD64 Stable Cell Line (High Expression)	SCCHO-ATP062H
CHO/Human PD-L1 Stable Cell Line (Low Expression)	SCCHO-ATP077L

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• *Related Products*

Products

Cat. No.

CHO/Human PD-L1 Stable Cell Line (Medium Expression)	SCCHO-ATP077M
CHO/Human PD-L1 Stable Cell Line (High Expression)	SCCHO-ATP077H
HEK293/FcRn (FCGRT & B2M) Cell Line	CHEK-ATP079
CHO/Human GPRC5D Stable Cell Line	CCHO-STP078
HEK293/Human ASGR1 Stable Cell Line	CHEK-ATP080
HEK293/Human CEACAM5 Stable Cell Line	CHEK-ATP083
HEK293/Human ROR1 Stable Cell Line	CHEK-ATP084
CHO/Human TSHR Stable Cell Line	SCCHO-ATP085
HEK293/Human TSHR Stable Cell Line	CHEK-ATP086
HEK293/Human Transferrin R Stable Cell Line	CHEK-ATP089
HEK293/Human DLL3 Stable Cell Line	CHEK-ATP090
HEK293/Human FOLR1 Stable Cell Line	CHEK-ATP091
HEK293/Human Glypican-3 (GPC3) Stable Cell Line	CHEK-ATP092
HEK293/Human APP (GFP) Stable Cell Line	CHEK-ATP081
HEK293/Human TMPRSS2-HA-P2A-mGFP Stable Cell Line	CHEK-ATP101
NIH-3T3/Human IGF-1 R Stable Cell Line Development Service	CNIH-ATP102
HEK293/Human Alpha-synuclein (GFP) Stable Cell Line	CHEK-ATP085
HEK293/Human Tau-K18 (GFP) Stable Cell Line	CHEK-ATP087
Raji/Human HVEM Stable Cell Line	SCRAJ-STF108
CHO/Human LIGHT Stable Cell Line	SCCHO-ATP109
CHO/Human BTLA Stable Cell Line	SCCHO-ATP110
CHO/Human DLL3 Stable Cell Line	SCCHO-ATP111
CHO/Human Glypican-3 (GPC3) Stable Cell Line	SCCHO-ATP112
HEK293/Human Transferrin Stable Cell Line	CHEK-ATP115
HEK293/Human NAPI-IIb Stable Cell Line	CHEK-ATP116
HEK293/Human Mesothelin Stable Cell Line	CHEK-ATP119
CHO/Human Mesothelin Stable Cell Line	SCCHO-ATP120
CHO/Human STEAP1 Stable Cell Line	SCCHO-ATP121
HEK293/Human ENPP3 Stable Cell Line	CHEK-ATP122
HEK293/Human LRRC15 Stable Cell Line	CHEK-ATP123

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• *Related Products*

<u>Products</u>	<u>Cat. No.</u>
HEK293/Human Claudin-1 Stable Cell Line	CHEK-ATP124
HEK293/Human Integrin alpha V beta 6 Stable Cell Line	CHEK-ATP125
HEK293/Human B7-H4 Stable Cell Line	CHEK-ATP126
HEK293/Human Cadherin-6 Stable Cell Line	CHEK-ATP127
NY-ESO-1 specific TCR-HEK293 cell line	CHEK-STP114
HEK293/Human LY6G6D Stable Cell Line	CHEK-ATP137
HEK293/Human Claudin-6 Stable Cell Line	CHEK-ATP138
HEK293/Human Claudin-9 Stable Cell Line	CHEK-ATP139
HEK293/Human CCR8 Stable Cell Line	CHEK-ATP140
CHO/Human c-MET Stable Cell Line	SCCHO-ATP141
HEK293/Human TL1A Stable Cell Line	CHEK-ATP142
HEK293/Human PD-1 Stable Cell Line	CHEK-ATP143
HEK293/Human c-MET Stable Cell Line	CHEK-ATP146
HEK293/Human HVEM Stable Cell Line	CHEK-ATP147
HEK293/Human EGF R Stable Cell Line	CHEK-ATP148
HEK293/Human ErbB3 Stable Cell Line	CHEK-ATP149
HEK293/Human ErbB2 Stable Cell Line	CHEK-ATP150
HEK293/Human uPAR Stable Cell Line	CHEK-ATP151
CHO/Human uPAR Stable Cell Line	SCCHO-ATP152
HEK293/Human CD19 Stable Cell Line	CHEK-ATP003
HEK293/Human NKp46 Stable Cell Line	CHEK-ATP153
HEK293/Human GLP-1R Stable Cell Line (High Expression)	CHEK-ATP160
HEK293/Human SORT1 Stable Cell Line	CHEK-ATP155
HEK293/Human RAGE Stable Cell Line	CHEK-ATP156
HEK293/Human NGFR Stable Cell Line	CHEK-ATP157
HEK293/Human LILRB3 Stable Cell Line	CHEK-ATP159
HEK293/Human STEAP1 Stable Cell Line	CHEK-ATP154
HEK293/Human GLP-1R Stable Cell Line (Medium Expression)	CHEK-ATP161
HEK293/Human GLP-1R Stable Cell Line (Low Expression)	CHEK-ATP162
CHO/Human B7-H3 (4Ig) Stable Cell Line	SCCHO-ATP169

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• Related Products

<u>Products</u>	<u>Cat. No.</u>
CHO/Human CD79A&CD79B Stable Cell Line	SCCHO-ATP170
CHO/Human CD79B Stable Cell Line	SCCHO-ATP171
HEK293/Human ASGR1&ASGR2 Stable Cell Line	CHEK-ATP172
HEK293/Human Cadherin-17 Stable Cell Line	CHEK-ATP173
HEK293/Human GPR75 Stable Cell Line	CHEK-ATP174
HEK293/Human EpCAM Stable Cell Line	CHEK-ATP175
HEK293/Human TPBG Stable Cell Line	CHEK-ATP176
CHO/Cynomolgus Glypican-3 (GPC3) Stable Cell Line	SCCHO-ATP179
HEK293/Human GUCY2C Stable Cell Line	CHEK-ATP182
HEK293/Human SEZ6 Stable Cell Line	CHEK-ATP183
HEK293/Human FAP Stable Cell Line	CHEK-ATP184
HEK293/Human PSMA Stable Cell Line	CHEK-ATP185
HEK293/Human PTK7 Stable Cell Line	CHEK-ATP186
HEK293/Human TrkC Stable Cell Line	CHEK-ATP189
HEK293/Human TrkA Stable Cell Line	CHEK-ATP192
CHO/Mouse FCGRT-P2A-mGFP&B2M Stable Cell Line	SCCHO-ATP193
HEK293/Human MCAM Stable Cell Line	CHEK-ATP195
MDCK/Mouse FCGRT-P2A-mGFP&B2M Stable Cell Line Development Service	SCMDC-ATP196
HEK293/Membrane-Bound Human TL1A Stable Cell Line	CHEK-ATP198
HEK293/Human IDH1(132H)-P2A-mGFP&Luc Stable Cell Line	CHEK-ATP199
HEK293/Human IDH1(132R)-P2A-mGFP&Luc Stable Cell Line	CHEK-ATP200
Raji/Membrane-Bound Human TL1A Stable Cell Line	SCRAJ-STT204
HEK293/Human GIPR Stable Cell Line (High Expression)	CHEK-ATP206
HEK293/Human GIPR Stable Cell Line (Medium Expression)	CHEK-ATP207
HEK293/Human GPC3 ΔHS Stable Cell Line	CHEK-ATP212
CHO/Human MRGPRX2 Stable Cell Line	SCCHO-ATP215
HEK293/Human c-MET&ErbB3 Stable Cell Line	CHEK-ATP217
HEK293/Human BCMA Stable Cell Line	CHEK-ATP218

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• *Related Products*

<u>Products</u>	<u>Cat. No.</u>
CHO/Human CD32a (131R) Stable Cell Line	SCCHO-ATP223
CHO/Human CD16a (158F) Stable Cell Line	SCCHO-ATP224
CHO/Human CD89 Stable Cell Line	SCCHO-ATP225
Raji/Human TL1A Stable Cell Line	CRAJ-STP232
CHO/Human CDCP1 (R368A, K369A) Stable Cell Line	CCHO-ATP234
CHO/Human CDCP1 (NTF&CTF) Stable Cell Line	CCHO-ATP235
HEK293/Human Tissue Factor Stable Cell Line	CHEK-ATP240
CHO/Human MAdCAM-1 Stable Cell Line	CCHO-ATP241
HEK293/Human Integrin alpha 4 beta 7 (ITGA4&ITGB7) Stable Cell Line	CHEK-ATP243
Jurkat/Human Transmembrane TNF-alpha (mTNF) Stable Cell Line	CJUR-STF248
CHO/Human CXCR3 Stable Cell Line	CCHO-ATP252
HEK293/Human CXCR3 Stable Cell Line	CHEK-ATP253
CHO/Human Integrin alpha V beta 6 Stable Cell Line	CCHO-ATP254
HEK293/Human ASGR2 Stable Cell Line	CHEK-ATP256
Jurkat/Luc Stable Cell Line	CJUR-STP258
HEK293/Human FGF R2 (IIIb) Stable Cell Line	CHEK-ATP259
HEK293/Human STEAP2 Stable Cell Line	CHEK-ATP263
CHO/Human PD-1 Stable Cell Line	CCHO-ATP266
HEK293/Human EGF R & ErbB3 Stable Cell Line	CHEK-ATP276