# HEK293/Human GIPR Stable Cell Line (Low Expression) Data Sheet

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# HEK293/Human GIPR Stable Cell Line (Low Expression) Data Sheet

## HEK293/Human GIPR Stable Cell Line (Low Expression)

| Catalog No. | Size |
| --- | --- |
| CHEK-ATP208 | 2 × (1 vial contains ~5×10^6 cells) |

### • *Description*

The HEK293/Human GIPR Stable Cell Line was engineered to express the receptor full length human GIPR (Uniprot: P48546-1), with different levels of GIPR expression (High, Medium, Low). Surface expression of human GIPR was confirmed by flow cytometry.

### • *Application*

- Useful for cell-based GIPR binding assay
- Screen for human GIPR agonists based on cAMP accumulation assay

### • *Cell Line Profile*

| | |
| --- | --- |
| **Cell line** | HEK293/Human GIPR Stable Cell Line (Low Expression) |
| **Host Cell** | HEK293 |
| **Property** | Adherent |
| **Complete Growth Medium** | DMEM + 10% FBS |
| **Selection Marker** | Hygromycin B (20 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***
  - 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)
  - 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, 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)
  - 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% $CO_2$ 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 2 mL of 0.25% Trypsin-EDTA to the T-75 flask. Place the flask at 37°C for 2-3 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 1:4 to 1:8 is recommended. Adjust the ratio based on your specific culture system.
6. Incubate at 37°C with 5% $CO_2$ 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*

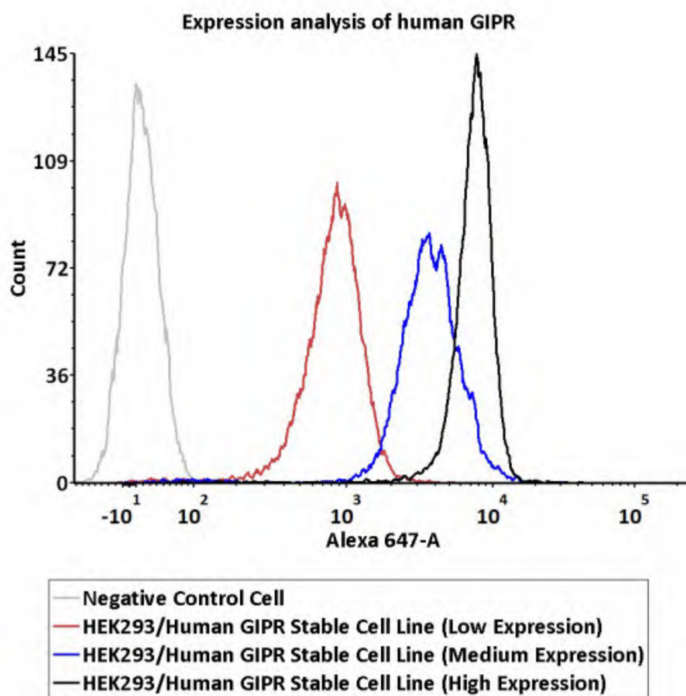
1. When the cell culture reaches 80-90% confluency, remove and discard the spent medium.
2. Wash the cells once with sterile PBS. Avoid adding PBS directly onto the cell surface.
3. Add 2 mL of 0.25% Trypsin-EDTA to the T-75 flask. Place the flask at 37°C for 2-3 minutes, until 90% of the cells have 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 $5\times10^6$ to $1\times10^7$ 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*

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.

# HEK293/Human GIPR Stable Cell Line (Low Expression) Data Sheet

## • *Receptor Assay*

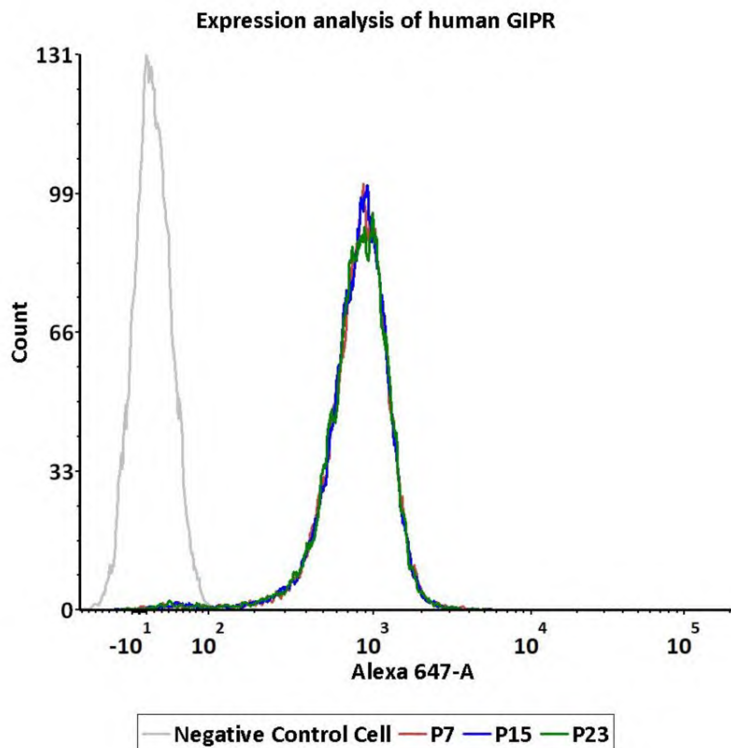



| Catalog No. | Stable Cell Line | MFI for GIPR (Alexa 647) |
|---|---|---|
| CHEK-ATP208 | HEK293/Human GIPR Stable Cell Line (Low Expression) | 816.14 |
| CHEK-ATP207 | HEK293/Human GIPR Stable Cell Line (Medium Expression) | 3519.54 |
| CHEK-ATP206 | HEK293/Human GIPR Stable Cell Line (High Expression) | 7286.12 |

**Fig1. Expression analysis of human GIPR on HEK293/Human GIPR Stable Cell Line by FACS.** Cell surface staining using Alexa 647-labeled anti-human GIPR antibody was performed on HEK293/Human GIPR Stable Cell Line with different expression levels: HEK293/Human GIPR Stable Cell Line (Low Expression); HEK293/Human GIPR Stable Cell Line (Medium Expression); HEK293/Human GIPR Stable Cell Line (High Expression).

# HEK293/Human GIPR Stable Cell Line (Low Expression) Data Sheet

***• Passage Stability***




| Passage | MFI for GIPR (Alexa 647) |
|---|---|
| P7 | 815.25 |
| P15 | 812.61 |
| P23 | 803.78 |

**Fig2. Passage stability analysis of receptors expression by FACS.** Flow cytometry surface staining of human GIPR on HEK293/Human GIPR Stable Cell Line (Low Expression) demonstrates consistent mean fluorescent intensity across passage 7-23.

# HEK293/Human GIPR Stable Cell Line (Low Expression) Data Sheet

| **Products** | **Cat.No.** |
|---|---|
| HEK293/Human GIPR Stable Cell Line (High Expression) | CHEK-ATP206 |
| HEK293/Human GIPR Stable Cell Line (Medium Expression) | CHEK-ATP207 |
| HEK293/Human GLP-1R Stable Cell Line (High Expression) | CHEK-ATP160 |
| HEK293/Human GLP-1R Stable Cell Line (Medium Expression) | CHEK-ATP161 |
| HEK293/Human GLP-1R Stable Cell Line (Low Expression) | CHEK-ATP162 |
| HEK293/Human ASGR1 Stable Cell Line | CHEK-ATP080 |
| Human GLP-1R (Luc) HEK293 Reporter Cell | CHEK-ATF096 |
| Human GCGR (Luc) HEK293 Reporter Cell | CHEK-ATF103 |
| Human GIPR (Luc) HEK293 Reporter Cell | CHEK-ATF104 |
| Human FGF-21 (Luc) HEK293 Reporter Cell | CHEK-ATF163 |
| Human Activin RII (Luc) HEK293 Reporter Cell | CHEK-ATF164 |
| HEK293/Human ASGR1&ASGR2 Stable Cell Line | CHEK-ATP172 |
| HEK293/Human GPR75 Stable Cell Line | CHEK-ATP174 |
| Human THRB (Luc) HEK293 Reporter Cell | CHEK-ATF181 |
| Human THRA (Luc) HEK293 Reporter Cell | CHEK-ATF180 |
| HEK293/Human GLP-1R&GIPR Stable Cell Line | CHEK-ATP205 |