HEK293 Human KOR Gα16 Cell Line

HEK293 Human KOR Gα16 Cell Line provides an engineered cellular model for investigating the receptor system specified in its construct.
GPCR signaling connects extracellular ligand recognition with intracellular responses.
Applications include receptor pharmacology, agonist or antagonist profiling, and development of cell-based functional assays.

CTDS SKU	CTDS91309
Pack size	1 x 1 million cells
Product category	Engineered Cell Lines
Product subcategory	GPCR Cell Lines
Detailed category	Class A (Rhodopsin)

PRODUCT BACKGROUND

HEK293 Human KOR Gα16 Cell Line is an engineered GPCR cell model expressing or functionally linked to OPRK1(KOR) for controlled in vitro research. It is suitable for target and pathway characterization, cell-based screening, pharmacology, potency testing and assay development. Reporter, resistance or other engineered features stated in the product name can support quantitative or comparative functional readouts. For research use only.

BIOLOGICAL CHARACTERISTICS

Host cell	HEK293
Alternate name 1	GPCR engineered Stable Cell Line
Cell growth type	Adherent Cells
Biosafety level	BSL-2
Tumorigenicity / cell status	Normal Cells
Target / construct	Stable human KOR receptor + Gα16 signaling construct

CULTURE REQUIREMENTS

Culture medium	DMEM (high glucose) + 10% FBS; for engineered/stable lines, maintain the product-specific CTDS selection antibiotic(s) at the recommended concentration.
Freezing medium	90% FBS + 10% DMSO

RECEIPT AND CRYOPRESERVATION

Upon Receipt of Cells
1 mL cryovials are packed in dry ice for transportation. After receipt, clean the ceryovial with 70% IPA to disinfect. Stored in a -80°C refrigerator overnight and then transfer to liquid nitrogen or revive them directly as per your use.

Note If the dry ice is found to have evaporated or the cryovial cap is detached/ damaged or the cells seems damaged, please contact us immediately.

CULTURE AND RECOVERY INSTRUCTIONS

Recovery of Frozen Cells:

For Suspension Cell passaging, the following methods can be used as reference:

1) Shake the cryotube containing 1mL of cell suspension quickly within seconds in a 37°C water bath to thaw.
2) Add it to a centrifuge tube containing 4-6mL of complete medium and mix well. Centrifuge at 1000rpm for 3-5mins.
3) Discard the supernatant, and resuspend the cells in complete medium.
4) Then add the cell suspension to a culture flask (or dish) containing 6-8ml of complete medium and culture overnight at 37°C.
5) Observe the cell growth and cell density under a microscope the next day.
6) Cell subculture: If the cell density reaches 80%-90%, subculture can be performed.

For Adherent Cell passaging, the following methods can be used as reference:

1) Shake the cryotube containing 1mL of cell suspension quickly within seconds in a 37°C water bath to thaw.
2) Add it to a centrifuge tube containing 4-6mL of complete medium and mix well. Centrifuge at 1000rpm for 3-5mins.
3) Discard the supernatant, and rinse the cells 1-2 times with PBS without calcium and magnesium ions.
4) Add 0.25% (w/v) trypsin-0.53 mM EDTA to the culture flask (1-2 mL for T25 flask, 2-3 mL for T75 flask),
5) Place in a 37°C incubator for digestion for 1-2 minutes (difficult-to-digest cells can be properly prolonged for digestion time),
6) Observe the cell digestion under a microscope. If most of the cells become round and fall off, quickly take it back to the operating table, tap the culture flask a few times, and add 3-4 ml of culture medium containing 10% FBS to terminate digestion.

7) Gently mix and aspirate, centrifuge at 1000rpm for 3-5min, discard the supernatant. Add 1-2mL culture medium and mix evenly.
8) Divide the cell suspension into new T25 bottles at a ratio of 1:2.
9) Add 6-8ml of new complete culture medium prepared according to the instructions to maintain cell growth vitality, and perform subsequent passages at a ratio of 1:2~1:5 as per actual conditions.

CHARACTERIZATION AND QUALITY INFORMATION

Sterility	Bacteria: Negative Yeast: Negative Mycoplasma: Negative
Pathogen testing	HIV: Negative Hepatitis B: Negative
Markers / assay readout	Calcium-Mobilization Functional Assay
Assay / validation method	Calcium-Mobilization Functional assay
Authentication / QC evidence	Sterility: Bacteria: Negative Yeast: Negative Mycoplasma: Negative; Pathogen testing: HIV: Negative Hepatitis B: Negative

HANDLING AND STORAGE

Shelf life	12 months at time of shipping
Shipping	Shipped on Dry Ice at -20°C
Storage	Store at -176°C.
Intended use	For Research Use Only. Not for diagnostics or human use.

PRODUCT DISCLAIMER

The data indicated herein are as indicated and validated in our laboratory. As these cell lines are of human/anumal origin, they carry a risk of latent human/animal viruses (e.g., Epstein-Barr virus, hepatitis B). Therefore they should be handled accordingly with precaution. These reagents are for research use only and not for in-vitro diagnostics or human use.

ADDITIONAL CLASSIFICATION

Product grouping	Engineered Cell Lines
Product subgroup	GPCR | Class A (Rhodopsin)

Not a lot-specific certificate of analysis.