Human TRPV1 Stable Cell Line-HEK293

Cat. No. CSC-RI0201 **Lot. No.** (See product label)

SPECIFICATION

Species	Human
Source	HEK293
Cell Line Description	HEK293-HuTRPV1 cell line is a hypotriploid human cell line, which has been transfected with a human transient receptor potential cation channel, subfamily V, member 1 (TRPV1) to allow stably express of the human TRPV1. It is an example of a cell line transfected using our proprietary CBTGS gene screening and amplification system.
Background	The human TRPV1 gene encodes the pore-forming subunit of TRPV1, a non-selective, cation-permeable channel expressed in CNS and PNS (dorsal root ganglion) sensory neurons. TRPV1 channels are therapeutic targets in inflammatory bowel, incontinence, rheumatoid arthritis, pain, and cough.
Growth Properties	Adherent
Morphology	Epithelial
Host Cell	HEK293
Cell Line Validation	1. Gene expression: qPCR experiments determined specific expression of human TRPV1.2. Protein expression: TRPV1 expression in this cell line has been validated by WB.3. Functional validation: FLIPR, manual patch clamp

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Application	Therapeutic Area: cancer, genitourinary, metabolic & gastrointestinal, pain & inflammation, pulmonary-respiratory, vascular
Sub-type	Transient Receptor Potential channels
Propagation	Complete growth medium: DMEM/Complete growth medium: Ham's F12; 10% FBS; 500 µg/mL G418Atmosphere: air, 95%; carbon dioxide (CO2), 5% Temperature: 37.0°C
Starting Cells From Frozen Cell Stock	1. Remove the packaging cell lines from liquid nitrogen and carry out a quick thaw. Float the cells in the 37°C water bath for 2 minutes until nearly (80%) thawed. Once cells are thawed, it is important to dilute the cells 1:10 in growth media immediately to reduce the potentially toxic effects of the DMSO preservative on the cells.2. Clean the outside of the vial with 70% ethanol before opening.3. Remove the cells from the vial and add slowly into a 15ml conical tube containing 10 ml pre-warmed media. 4. Centrifuge for 3 minutes 1000 xg to pellet cells and remove the supernatant.5. Add 14 ml of media and transfer cells to a T25 flask or a 100 mm culture dish.6. Place the cells in the 37°C incubator with 5% CO2.7. Allow incubation for 3-4 days to reach confluence. The cells will re-attach to the surface over a period of several days in culture at 37°C.
Subculturing	1. Remove and discard culture medium.2. Briefly rinse the cell layer with 0.25% (w/v) Trypsin-0.53 mM EDTA solution to remove all traces of serum that contains trypsin inhibitor.3. Add 2.0 to 3.0 ml of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes).Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal.4. Add 6.0 to 8.0 ml of complete growth medium and aspirate cells by gently pipetting.5. Add appropriate aliquots of the cell suspension to new culture vessels.Incubate cultures at 37°C.Subcultivation Ratio: A

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	subcultivation ratio of 1:6 to 1:10 is recommended Medium Renewal: 2 to 3 times per week
Mycoplasma	Mycoplasma Status: Negative (MycoAlert Kit)
Freeze Medium	Complete growth medium 90%; DMSO, 10%
Storage	Liquid nitrogen
Preservation	1. Detach cells from culture dish according to the Sub-Culture Procedure.2. Resuspend cells at a density of 5 x 10^6 cells/mL in freeze medium.Note: A T-75 culture flask typically yields enough cells for preparing two frozen vials.3. Aliquot 1 mL cells into cryogenic vials.4. Place vials in a freezing container and store at –80 °C overnight.5. Transfer vials to liquid nitrogen for long term storage. If properly stored, cells should remain stable for years.
Safety Considerations	The following safety precautions should be observed.1. Use pipette aids to prevent ingestion and keep aerosols down to a minimum.2. No eating, drinking or smoking while handling the stable line.3. Wash hands after handling the stable line and before leaving the lab.4. Decontaminate work surface with disinfectant or 70% ethanol before and after working with stable cells.5. All waste should be considered hazardous.6. Dispose of all liquid waste after each experiment and treat with bleach.
Ship	Dry ice

GENE INFORMATION

Gene Name	TRPV1 transient receptor potential cation channel, subfamily V, member 1 [Homo sapiens]
Official Symbol	TRPV1

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Synonyms	TRPV1; transient receptor potential cation channel, subfamily V, member 1; vanilloid receptor subtype 1 , VR1; transient receptor potential cation channel subfamily V member 1; OTRPC1; capsaicin receptor; osm-9-like TRP channel 1; vanilloid receptor subtype 1; transient receptor potential vanilloid 1a; transient receptor potential vanilloid 1b; VR1; DKFZp434K0220;
Gene ID	7442
mRNA Refseq	NM_018727
Protein Refseq	NP_061197
MIM	602076
UniProt ID	Q8NER1
Chromosome Location	17p13.3
Pathway	Neuroactive ligand-receptor interaction, organism-specific biosystem; Neuroactive ligand-receptor interaction, conserved biosystem; Trk receptor signaling mediated by PI3K and PLC-gamma, organism-specific biosystem; Trk receptor signaling mediated by the MAPK pathway, organism-specific biosystem;
Function	ATP binding; calcium channel activity; calmodulin binding; chloride channel regulator activity; nucleotide binding;

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