

MAP2K4 Knockout 293T Cell Line, Homozygous

Catalog No.: RM50195

Basic Information

Catalog No.

RM50195

Category

Cell Line

Parental Cell line

293T

Genotype

Knockout

Gene Information

Gene Symbol

MAP2K4

Species

Human

Gene ID

6416

Swiss Prot

P45985

Synonyms

JNKK; JNKK1; MAPKK4; MEK4; MKK4;
PRKMK4; SAPKK-1; SAPKK1; SEK1;
SERK1; SKK1

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Background

This gene encodes a member of the mitogen-activated protein kinase (MAPK) family. Members of this family act as an integration point for multiple biochemical signals and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation, and development. They form a three-tiered signaling module composed of MAPKKKs, MAPKKs, and MAPKs. This protein is phosphorylated at serine and threonine residues by MAPKKKs and subsequently phosphorylates downstream MAPK targets at threonine and tyrosine residues. A similar protein in mouse has been reported to play a role in liver organogenesis. A pseudogene of this gene is located on the long arm of chromosome X. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2013]

Product Information

Description

MAP2K4 Knockout 293T Cell line is engineered from 293T cell line with Gene-Editing Technology.

Allele-1:exon1 was deleted

Allele-2:exon1 was deleted

Mammalian cells such as human, rat and mouse cells are normally diploid with two alleles. Homozygote: both alleles were knocked out, mRNA has no signal, no expression of proteins. Heterozygote: only one allele was knocked out, the mRNA transcript levels was decreased compared to wild type, and the protein expression levels was also lower than that of the wild type.

Packaging

1 vial parental cell line and 1 vial knockout cell line

Shipping Conditions

Dry ice

Amount

1~5x10⁶ cells/vial

Storage

Stored in liquid nitrogen for a long time less than -130°C. Minimizing freeze-thaw cycles.

Protocol

Upon arrival, it should be maintained in DMEM medium with 10%(v/v) fetal bovine serum and 100U penicillin-streptomycin, at 37°C with 5% CO₂ condition.

1. Thaw the vial in 37°C water bath, and shake it to melt as soon as possible.
2. Transfer the cell suspension to a 15mL conical tube with pre-warmed 5mL complete medium and centrifuge 1000rpm for approximately 5 minutes at room temperature.
3. Remove and discard the supernatant.
4. Resuspend the cell pellet with 1mL pre-warmed complete medium and seed in 10cm dish.
5. Add 8-10mL of complete medium.
6. Incubate the culture at 37°C incubator with 5% CO₂.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Sequencing data

WT GCTTGCTGCATTGC*****CGCGGCAACCCGCG
Mut GCTTGCTGCATTGC***Deletion***CGCGGCAACCCGCG
Allele-1: exon1 was deleted

WT GCAGCCGCCGCGGC*****CTGCCCCAGCGGAC
Mut GCAGCCGCCGCGGC***Deletion***CTGCCCCAGCGGAC
Allele-2: exon1 was deleted

Genome sequence analysis of PCR products from parental (WT) and MAP2K4 knockout (KO) 293T cells, using sanger sequencing.