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GFRA1 Knockout 293T Cell Line, Homozygous

Catalog No.: RM02441

Basic Information

Catalog No.
RM02441

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Background

This gene encodes a member of the glial cell line-derived neurotrophic factor receptor (GDNFR) family of proteins. The encoded preproprotein is proteolytically processed to generate the mature receptor. Glial cell line-derived neurotrophic factor (GDNF) and neurturin (NTN) are two structurally related, potent neurotrophic factors that play key roles in the control of neuron survival and differentiation. This receptor is a glycosylphosphatidylinositol (GPI)-linked cell surface receptor for both GDNF and NTN, and mediates activation of the RET tyrosine kinase receptor. This gene is a candidate gene for Hirschsprung disease. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein that is proteolytically processed. [provided by RefSeq, Jan 2016]

Gene Information

Gene Symbol
GFRA1

Species
Human

Gene ID
2674

Swiss Prot
P56159

Synonyms
GDNFR; GDNFRA; GFR-ALPHA-1; RET1L; RETL1; TRNR1

Product Information

Description
GFRA1 Knockout 293T Cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:79bp deletion in exon2
Allele-2:91bp deletion in exon2
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
1~5x10^6 cells/vial

Storage
Stored in liquid nitrogen for a long time less than -130℃. 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℃ with 5% CO_2 condition.
1. Thaw the vial in 37℃ 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℃ incubator with 5% CO_2.
7. A subcultivation ratio of 1:2-1:4 is recommended.

Contact

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Sequencing data

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WT    CGGCCGAAGTGAGC**************TAAGGCAGTGCGTG
Mut   CGGCCGAAGTGAGC***Deletion***TAAGGCAGTGCGTG
Allele-1: 79bp deletion in exon2
WT    GACTTGCTCCTGTC**************CTAAGGCAGTGCGT
Mut   GACTTGCTCCTGTC***Deletion***CTAAGGCAGTGCGT
Allele-2: 91bp deletion in exon2
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Genome sequence analysis of PCR products from parental (WT) and GFRA1 knockout (KO) 293T cells, using sanger sequencing.