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INSR Knockout 293T Cell Line, Homozygous

Catalog No.: RM50117

Basic Information

Catalog No.
RM50117

Category
Cell Line

Parental Cell line
293T

Genotype
Knockout

Background

This gene encodes a member of the receptor tyrosine kinase family of proteins. The encoded preproprotein is proteolytically processed to generate alpha and beta subunits that form a heterotetrameric receptor. Binding of insulin or other ligands to this receptor activates the insulin signaling pathway, which regulates glucose uptake and release, as well as the synthesis and storage of carbohydrates, lipids and protein. Mutations in this gene underlie the inherited severe insulin resistance syndromes including type A insulin resistance syndrome, Donohue syndrome and Rabson-Mendenhall syndrome. Alternative splicing results in multiple transcript variants.

Gene Information

Gene Symbol
INSR

Species
Human

Gene ID
3643

Swiss Prot
P06213

Synonyms
HHF5; CD220; Insulin Receptor

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Product Information

Description
INSR Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:151bp deletion in exon2
Allele-2:151bp 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.

Sequencing data

WT TCCCCAACCTCACG**********TCGACTGGTCCCGT
Mut TCCCCAACCTCACG***Deletion***TCGACTGGTCCCGT
Allele-1: 151bp deletion in exon2

WT TCCCCAACCTCACG**********TCGACTGGTCCCGT
Mut TCCCCAACCTCACG***Deletion***TCGACTGGTCCCGT
Allele-2: 151bp deletion in exon2

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