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HEXA Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02209

Basic Information

Catalog No.
RM02209

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Background

This gene encodes a member of the glycosyl hydrolase 20 family of proteins. The encoded preproprotein is proteolytically processed to generate the alpha subunit of the lysosomal enzyme beta-hexosaminidase. This enzyme, together with the cofactor GM2 activator protein, catalyzes the degradation of the ganglioside GM2, and other molecules containing terminal N-acetyl hexosamines. Mutations in this gene lead to an accumulation of GM2 ganglioside in neurons, the underlying cause of neurodegenerative disorders termed the GM2 gangliosidoses, including Tay-Sachs disease (GM2-gangliosidosis type I). 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
HEXA

Species
Human

Gene ID
3073

Swiss Prot
P06865

Synonyms
TSD

Product Information

Description
HEXA Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:85bp deletion in exon1
Allele-2:94bp deletion in exon1
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
Store at -20℃

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

WT TTCGCAGGACGGGC**********CGATGTCAGCTCGG
Mut TTCGCAGGACGGGC***Deletion***CGATGTCAGCTCGG
Allele-1: 85bp deletion in exon1

WT TTCGCAGGACGGGC**********TCGGCCGCGCAGCC
Mut TTCGCAGGACGGGC***Deletion***TCGGCCGCGCAGCC
Allele-2: 94bp deletion in exon1

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

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