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CAST Knockout HeLa Cell Line, Homozygous

Catalog No.: RM02228

Basic Information

Catalog No.
RM02228

Category
Cell Line

Parental Cell line
HeLa

Genotype
Knockout

Gene Information

Gene Symbol
CAST

Species
Human

Gene ID
831

Swiss Prot
P20810

Synonyms
BS-17; PLACK

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Background

The protein encoded by this gene is an endogenous calpain (calcium-dependent cysteine protease) inhibitor. It consists of an N-terminal domain L and four repetitive calpain-inhibition domains (domains 1-4), and it is involved in the proteolysis of amyloid precursor protein. The calpain/calpastatin system is involved in numerous membrane fusion events, such as neural vesicle exocytosis and platelet and red-cell aggregation. The encoded protein is also thought to affect the expression levels of genes encoding structural or regulatory proteins. Alternatively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq, Jun 2010]

Product Information

Description
CAST Knockout cell line is engineered from HeLa cell line with Gene-Editing Technology.
Allele-1:1bp deletion in exon4
Allele-2:2bp deletion in exon4
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.

Sequencing data

WT CAAGCAGGCATCAGATACAGGAAGTAACG
Mut CAAGCAGGCATCAG- TACAGGAAGTAACG
Allele-1: 1bp deletion in exon4

WT CCAAGCAGGCATCAGATACAGGAAGTAACG
Mut CCAAGCAGGCATCA - -TACAGGAAGTAACG
Allele-2: 2bp deletion in exon4

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