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# CASP3 Knockout 293T Cell Line, Homozygous

**Catalog No.: RM01818**

## Basic Information

**Catalog No.**
RM01818

**Category**
Cell Line

**Parental Cell line**
293T

**Genotype**
Knockout

## Background

This gene encodes a protein which is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein cleaves and activates caspases 6, 7 and 9, and the protein itself is processed by caspases 8, 9 and 10. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease. Alternative splicing of this gene results in two transcript variants that encode the same protein.

## Gene Information

**Gene Symbol**
CASP3

**Species**
Human

**Gene ID**
836

**Swiss Prot**
P42574

**Synonyms**
CPP32; CPP32B; SCA-1

## Contact


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## Product Information

**Description**
CASP3 Knockout cell line is engineered from 293T cell line with Gene-Editing Technology.
Allele-1:46bp deletion in exon2
Allele-2:46bp 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

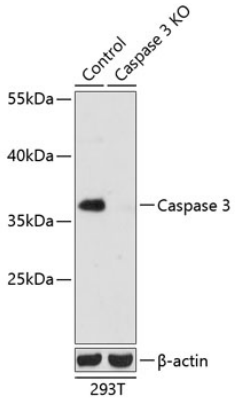
**Amount**
1~5x$10^6$ cells/vial.

**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.

## WB data




Western blot analysis of extracts from parental (Control) and CASP3 knockout (KO) 293T cells, using CASP3 antibody at 1:1000 dilution.

## Sequencing data

WT AGCGAATCAATGGA**********ATGGGTTTATGTAT
Mut AGCGAATCAATGGA***Deletion***ATGGGTTTATGTAT
Allele-1: 46bp deletion in exon2

WT AGCGAATCAATGGA**********ATGGGTTTATGTAT
Mut AGCGAATCAATGGA***Deletion***ATGGGTTTATGTAT
Allele-2: 46bp deletion in exon2

Genome sequence analysis of PCR products from parental (WT) and CASP3 knockout (KO) 293T cells, using sanger sequencing.