

Caspase-3

Human, CASP3

Expressed in *E.Coli*

Cat. No. CBCRY39

Lot. No. (See product label)

BACKGROUND

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.

MOLECULAR DESCRIPTION

Protein classification: hydrolase

Structure Weight: 114694.18 Da

Polymer: 1

Molecule: Caspase-3

Chains: A, B, C, D

Type: polypeptide (L)

Chain Length: 253 amino acids

CRYSTAL INFORMATION

PDB ID: [3DEK](#)

MMDB ID: [66481](#)

Source: E.Coli

Method: X-Ray Diffraction

Resolution: 2.4 Å

Modified Residues: Cysteinesulfonic acid

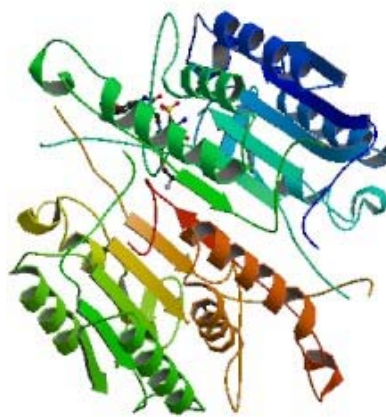
RELATED PDB IDs

[3DEH](#): Caspase-3 complexed with an inhibitor(RXA)

[3DEI](#): Caspase-3 complexed with an inhibitor(RXB)

[3DEJ](#): Caspase-3 complexed with an inhibitor(RXC)

CRYSTAL STRUCTURE



GENE INFORMATION

Gene Name: [CASP3](#)

Synonyms: CPP32; CPP32B; procaspase3; Yama; SCA-1; OTTHUMP00000165054; PARP cleavage protease; SREBP cleavage activity 1; apopain; caspase 3; caspase 3, apoptosis-related cysteine protease; cysteine protease CPP32;

UniProt ID: [P42574](#)

GeneID: [836](#)

Chromosome Location: 4q34

Function: cysteine-type endopeptidase activity; cyclin-dependent protein kinase inhibitor activity; peptidase activity; cysteine-type peptidase activity; hydrolase activity

PRIMARY CITATION

Du, J.-Q., Wu, J., Zhang, H.-J., Zhang, Y.-H., Qiu, B.-Y., Wu, F., Chen, Y.-H., Li, J.-Y., Nan, F.-J., Ding, J.-P., Li, J. (2008) Isoquinoline-1,3,4-trione Derivatives Inactivate Caspase-3 by Generation of Reactive Oxygen Species *J.Biol.Chem.* 283: 30205-30215

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