Recombinant Rat Caspase 3, His-tagged

Cat. No. Casp3-748R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant rat Casp3 was fused at the N- and C- terminus to a His•Tag sequence and expressed in*E. coli*as a single polypeptide. Subsequently undergoes spontaneous yield the active enzyme. MW = 11000 and 17000.
Species	Rat
Source	E.coli
Description	The CASP3 protein 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 that 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.
Purity	≥80% by SDS-PAGE.
Form	Lyophilized.
Specific Activity	≥9,000 units/mg protein.
Unit definition	One unit is defined as the amount of enzyme that will cleave 1 nmol of the substrate

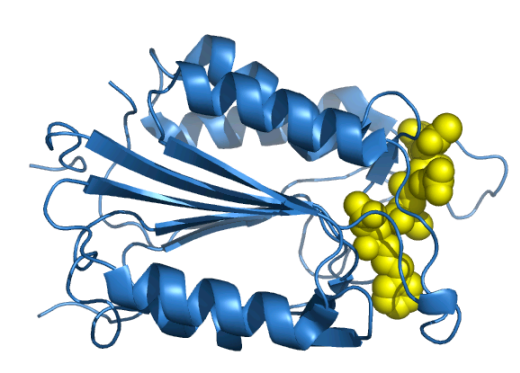
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	DEVD-pNA per h at 37°C, pH 7.2.
Solubility	Reconstitute in 100 µPBS (1 unit/µl).
Toxicity	Standard Handling (MSDS available upon request).
Recommended Reaction Conditions	50 mM HEPES, pH 7.2, 50 mM NaCl, 10 mM EDTA, 10 mM DTT, 0.1% CHAPS, and 5% glycerol; 37°C.
Storage	≤ -70℃. Following reconstitution aliquot and freeze(-70℃). Stock solutions are stable for up to 6 months at -70℃. Avoid freeze/thaw cycles of solutions.

GENE INFORMATION

Gene Name	Casp3 caspase 3 [Rattus norvegicus]
Synonyms	Casp3; caspase 3; Lice; MGC93645; caspase-3; IRP; SCA-1; CASP-3; CPP-32; apopain; CPP32beta; protein Yama; yama protein; cysteine protease CPP32; SREBP cleavage activity 1; Caspase 3 apoptosis related cysteine protease (ICE-like cysteine protease); Caspase 3, apoptosis related cysteine protease (ICE-like cysteine protease); EC 3.4.22.56
Gene ID	25402
mRNA Refseq	NM_012922
Protein Refseq	NP_037054
UniProt ID	P55213
Chromosome	16q11

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Location	
Pathway	Alzheimer"s disease; Amyotrophic lateral sclerosis (ALS); Apoptosis; Colorectal cancer; Huntington"s disease; MAPK signaling pathway; Natural killer cell mediated cytotoxicity; Parkinson"s disease; Pathways in cancer; Viral myocarditis; p53 signaling pathway
Function	cyclin-dependent protein kinase inhibitor activity; cysteine-type endopeptidase activity; cysteine-type peptidase activity; peptidase activity; phospholipase A2 activator activity; protein binding
PDB rendering based on 1rhk.	

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