

Recombinant Human CASP3, His-tagged

Cat. No. CASP3-36H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human CASP3 produced in <i>E. Coli</i> is a double, non-glycosylated, polypeptide chain containing 258 amino acids and having a molecular mass of 29.7 kDa. The Caspase-3 is fused to His-Tag at C-terminus and purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Protein Length	29-277 aa
Description	CASP3 is part of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspase-3 enzyme results in the execution-phase of cell apoptosis/programmed cell death. Caspase 3 has been called the "henchman that goes around and executes the cell." Caspase3 exists as an inactive proenzyme which undergoes proteolytic processing at conserved aspartic residues to produce 2 subunits, large and small, that dimerize to form the active enzyme. CSN-mediated deneddylation is regulated by active CASP3. CASP-3 cleavage of RAD51 results in a functional decrease in RAD51 strand exchange activity and inhibition of caspase 3 activity increases RAD51 protein levels.
Amino Acid Sequence	SGISLDNSYK MDYPEMGLCI IINNKNFHKS TGMTSRSGTD VDAANLRETF RNLKYEVRNK NDLTREEIVE LMRDVSKEDH SKRSSFVCVL LSHGEEGIIF GTNGPVDLKK ITNFFRGDRC RSLTGKPKLF IIQACRGTEL DCGIETDSGV

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DDDMACHKIP VEADFLYAYS TAPGYYSWRN SKDGSWFIQS LCAMLKQYAD
 KLEFMHILTR VNRKVATEFE SFSFDATFHA KKQIPCIVSM LTKELYFYHH
 HHHHHHHH.

Physical Appearance	Sterile Filtered clear solution.
Purity	Greater than 90.0% as determined by both: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The Caspase3 solution (0.5 mg/ml) contains 50mM Hepes, pH-7.4 + 100 mM NaCl, 0.1% Chaps, 10 mM DTT & 10% glycerol.
Protein Uses	Caspase-3 should be preincubated with 10 mM DTT at room temperature for one hour to fully reduce the enzyme, before cleavage begins. If product tolerates reduced conditions, assay can be carried out in 20 mM Hepes, pH-7.4 + 150 mM NaCl & 10 mM DTT.
Stability	CASP3 Recombinant Human although stable at 4°C for 30 days, should be stored desiccated below -20°C for periods greater than 30 days. Please avoid freeze-thaw cycles.

GENE INFORMATION

Gene Name	CASP3 caspase 3, apoptosis-related cysteine peptidase [Homo sapiens]
Synonyms	CASP3; caspase 3, apoptosis-related cysteine peptidase; CPP32; SCA-1; CPP32B; Apopain; CPP-32; EC 3.4.22.56; EC 3.4.22.56; Yama; procaspase3; Cysteine protease CPP32; PARP cleavage protease; SREBP cleavage activity 1; Yama protein; SREBP cleavage activity 1; caspase 3, apoptosis-related cysteine peptidase; caspase 3, apoptosis-related cysteine protease

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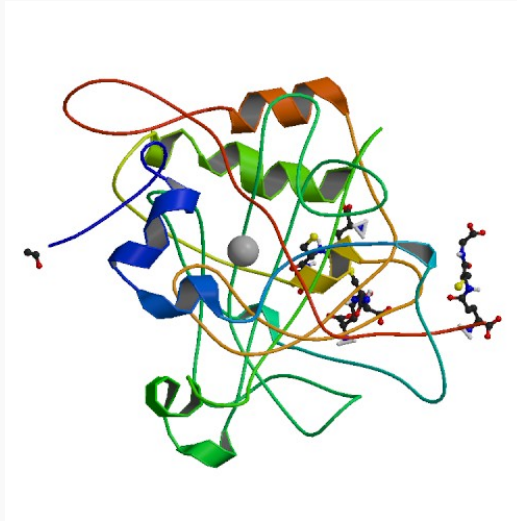
Gene ID	836
mRNA Refseq	NM_004346
Protein Refseq	NP_004337
UniProt ID	P42574
Chromosome Location	4q34
MIM	600636
Pathway	Alzheimer"s disease; Amyotrophic lateral sclerosis (ALS); Apoptosis; Colorectal cancer; Epithelial cell signaling in Helicobacter pylori infection; Huntington"s disease; MAPK signaling pathway; Natural killer cell mediated cytotoxicity; Parkinson"s disease; Pathways in cancer; p53 signaling pathway; Apoptosis; Signalling by NGF
Function	cyclin-dependent protein kinase inhibitor activity; cysteine-type endopeptidase activity; peptidase activity; protein binding

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