Product Data Sheet

Product Name:	CASP3 Human, Sf9
Cat. No.:	GP26136
Batch No.:	1

Product Data

Purity	>98%	Source	Sf9,Baculovirus cells.
Phycical Appearance	solid	Shipping Condition	withIcePacks
Synonyms	CASP3, CPP32, CPP32B, SCA-1, CASP-3, Apopain, Cysteine protease CPP32, CPP-32, Protein Yama, SREBP cleavage activity 1.		
Amino Acid Sequence	MSGISLDNSY KMDYPEMGLC IIINNKNFHK STGMTSRSGT DVDAANLRET FRNLKYEVRNKNDLTREEIV ELMRDVSKED HSKRSSFVCV LLSHGEEGII FGTNGPVDLK KITNFFRGDRCRSLTGKPKL FIIQACRGTE LDCGIETDSG VDDDMACHKI PVEADFLYAY STAPGYYSWRNSKDGSWFIQ SLCAMLKQYA DKLEFMHILT RVNRKVATEF ESFSFDATFH AKKQIPCIVS MLTKELYFYH HHHHHH		
Formulation	CASP3 protein solution (0.5mg/ml) containing 20mM HEPES buffer (pH 7.5), 0.1M NaCl, 1mM EDTA, 20% Glycerol and 1mM DTT.		

Introduction

Caspase 3 Apoptosis-Related Cysteine Peptidase (CASP3) belongs to the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a key role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues to generate 2 subunits, large and small, that dimerize to create the active enzyme. CASP3 protein cleaves and activates caspases 6, 7 and 9, and the protein itself is processed by caspases 8, 9 and 10. CASP3 is the leading caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is linked with neuronal death in Alzheimer's disease. In addition, CASP3 is involved in the cleavage of huntingtin. CASP3 also cleaves and activates sterol regulatory element binding proteins (SREBPs) between the basic helix-loop-helix leucine zipper domain and the membrane attachment domain. CASP3 initiates cell adhesion in sympathetic neurons through RET cleavage.

Biological Activity

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Specific activity is greater than 5,000 pmol/min/ug. One unit will liberate 1 pmoles of Ac-DEVD-AFC to Ac-DEVD and AFC per minute at pH7.5 at 25C.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

Background

CASP3 Human produced in Sf9 Baculovirus cells is a single, glycosylated polypeptide chain containing 256 amino acids (29-277 a.a.) and having a molecular mass of 29.4kDa (Migrates at 13.5-18kDa on SDS-PAGE under reducing conditions). CASP3 is expressed with a6 amino acid His tag at C-Terminus and purified by proprietary chromatographic techniques.

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