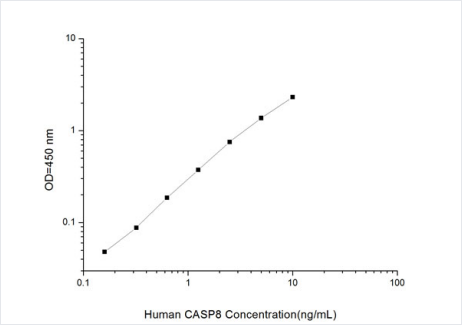
CASP8 ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	CASP8, ELISA Kit
Full Product Name	Human CASP8 (Caspase 8) ELISA Kit
Product Gene Name	CASP8 elisa kit
Species Reactivity	Human
Assay Type	Sandwich
Samples	Serum, Plasma, Biological Fluids
Detection Range	0.156-10ng/mL
Sensitivity	Min: 0.094ng/mL; Max: 10ng/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of Human CASP8. No significant cross-reactivity or interference between Human CASP8 and analogues was observed. Note: Limited by current skills and knowledge, it is impossible for us to complete the cross- reactivity detection between Human CASP8 and all the analogues, therefore, cross reaction may still exist.
Preparation and Storage	Store at 4 degree C.
Molecular Weight	61,836 Da
OMIM	211980
3D Structure	ModBase 3D Structure for Q14790
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CASP8 elisa kit	**Description:** The kit is a sandwich enzyme immunoassay for in vitro quantitative measurement of CASP8 in human serum, plasma and other biological fluids **Principle of the Assay:** This ELISA kit uses Sandwich-ELISA as the method. The micro ELISA plate provided in this kit has been pre-coated with an antibody specific to Human CASP8. Standards or samples are added to the appropriate micro ELISA plate wells and bound by the specific antibody. Then a biotinylated detection antibody specific for Human CASP8 and Avidin-Horseradish Peroxidase (HRP) conjugate is added to each micro plate well successively and incubated. Free components are washed away. The substrate solution is added to each well. Only those wells that contain Human CASP8, biotinylated detection antibody and Avidin-HRP conjugate will appear blue in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color turns yellow. The optical density (OD) is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The OD value is proportional to the concentration of Human CASP8. You can calculate the concentration of Human CASP8 in the samples by comparing the OD of the samples to the standard curve.
Other Notes	Small volumes of CASP8 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CASP8 purchase	MBS2513072 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the CASP8, ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CASP8. The ELISA analytical biochemical technique of the MBS2513072 kit is based on CASP8 antibody-CASP8 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CASP8 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CASP8. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of CASP8 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CASP8. It may not necessarily be applicable to this product.

NCBI GI #	122056476
NCBI GeneID	841
NCBI Accession #	NP_001073594.1
UniProt Primary Accession #	Q14790
UniProt Secondary Accession #	O14676; Q14791; Q14792; Q14793; Q14794; Q14795; Q14796; Q15780; Q15806; Q53TT5; Q8TDI1
UniProt Related Accession #	Q14790
GenBank Nucleotide #	NM_001080125.1
NCBI Official Full Name	caspase-8 isoform G
NCBI Official Synonym Full Names	caspase 8, apoptosis-related cysteine peptidase
NCBI Official Symbol	CASP8
NCBI Official Synonym Symbols	CAP4; MACH; MCH5; FLICE; ALPS2B; Casp-8
UniProt Protein Name	Caspase-8
UniProt Synonym Protein Names	Apoptotic cysteine protease; Apoptotic protease Mch-5; CAP4; FADD-homologous ICE/ced-3-like protease; FADD-like ICE; FLICE; ICE-like apoptotic protease 5; MORT1-associated ced-3 homolog; MACH
Protein Family	Caspase
UniProt Gene Name	CASP8
UniProt Synonym Gene Names	MCH5; CASP-8; FLICE; MACH
UniProt Entry Name	CASP8_HUMAN
NCBI Protein Information	caspase-8; FADD-homologous ICE/CED-3-like protease; FADD-like ICE; ICE-like apoptotic protease 5; MACH-alpha-1/2/3 protein; MACH-beta-1/2/3/4 protein; MORT1-associated ced-3 homolog; apoptotic cysteine protease; apoptotic protease Mch-5; caspase 8, apoptosis-related cysteine protease
NCBI Summary for CASP8	This gene encodes 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 composed of a prodomain, a large protease subunit, and a small protease subunit. Activation of caspases requires proteolytic processing at conserved internal aspartic residues to generate a heterodimeric enzyme consisting of the large and small subunits. This protein is involved in the programmed cell death induced by Fas and various apoptotic stimuli. The N-terminal FADD-like death effector domain of this protein suggests that it may interact with Fas-interacting protein FADD. This protein was detected in the insoluble fraction of the affected brain region from Huntington disease patients but not in those from normal controls, which implicated the role in neurodegenerative diseases. Many alternatively spliced transcript variants encoding different isoforms have been described, although not all variants have had their full-length sequences determined. [provided by RefSeq, Jul 2008]

UniProt Comments for CASP8	CASP8: Most upstream protease of the activation cascade of caspases responsible for the TNFRSF6/FAS mediated and TNFRSF1A induced cell death. Binding to the adapter molecule FADD recruits it to either receptor. The resulting aggregate called death- inducing signaling complex (DISC) performs CASP8 proteolytic activation. The active dimeric enzyme is then liberated from the DISC and free to activate downstream apoptotic proteases. Proteolytic fragments of the N-terminal propeptide (termed CAP3, CAP5 and CAP6) are likely retained in the DISC. Cleaves and activates CASP3, CASP4, CASP6, CASP7, CASP9 and CASP10. May participate in the GZMB apoptotic pathways. Cleaves ADPRT. Hydrolyzes the small-molecule substrate, Ac-Asp-Glu-Val-Asp-|-AMC. Likely target for the cowpox virus CRMA death inhibitory protein. Isoform 5, isoform 6, isoform 7 and isoform 8 lack the catalytic site and may interfere with the pro-apoptotic activity of the complex. Heterotetramer that consists of two anti-parallel arranged heterodimers, each one formed by a 18 kDa (p18) and a 10 kDa (p10) subunit. Interacts with FADD, CFLAR and PEA15. Isoform 9 interacts at the endoplasmic reticulum with a complex containing BCAP31, BAP29, BCL2 and/or BCL2L1. Interacts with TNFAIP8L2. Interacts with human cytomegalovirus/HHV-5 protein vICA/UL36; this interaction inhibits CASP8 activation. Isoform 1, isoform 5 and isoform 7 are expressed in a wide variety of tissues. Highest expression in peripheral blood leukocytes, spleen, thymus and liver. Barely detectable in brain, testis and skeletal muscle. Belongs to the peptidase C14A family. 9 isoforms of the human protein are produced by alternative splicing. Protein type: EC 3.4.22.61; Protease; Apoptosis Chromosomal Location of Human Ortholog: 2q33-q34 Cellular Component: nucleoplasm; mitochondrial outer membrane; neuron projection; cytoskeleton; mitochondrion; Noc1p-Noc2p complex; cytoplasm; CD95 death-inducing signaling complex; microtubule organizing center; cytosol; lipid raft Molecular Function: peptidase activity; protein binding; protein heterodimerization activity; ubiquitin protein ligase binding; cysteine-type endopeptidase activity; death receptor binding; protein complex binding; tumor necrosis factor receptor binding; cysteine-type peptidase activity Biological Process: macrophage differentiation; viral reproduction; T cell activation; protein heterooligomerization; apoptosis; positive regulation of proteolysis; heart development; natural killer cell activation; response to lipopolysaccharide; toll-like receptor 3 signaling pathway; proteolysis; response to estradiol stimulus; response to antibiotic; proteolysis involved in cellular protein catabolic process; angiogenesis; positive regulation of macrophage differentiation; toll-like receptor 4 signaling pathway; cell structure disassembly during apoptosis; caspase activation; positive regulation of I-kappaB kinase/NF-kappaB cascade; B cell activation; MyD88-independent toll-like receptor signaling pathway; negative regulation of I-kappaB kinase/NF-kappaB cascade; response to ethanol; induction of apoptosis via death domain receptors; toll-like receptor signaling pathway; response to cobalt ion; innate immune response; response to cold; neural tube formation Disease: Caspase 8 Deficiency; Breast Cancer; Lung Cancer; Hepatocellular Carcinoma
Research Articles on CASP8	**1.** our results indicate that the mechanism by which PAR-4 orchestrates the apoptotic process requires cleavage by caspase-8.
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