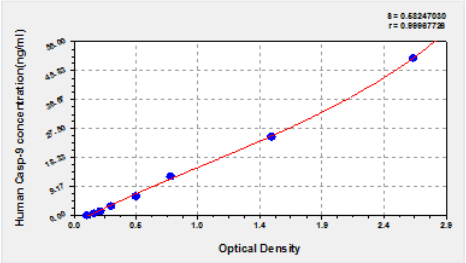
# Caspase 9, Apoptosis-Related Cysteine Peptidase (CASP9) ELISA Kit for Human

## PRODUCT OVERVIEW

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| **Product Name** | caspase 9, apoptosis-related cysteine peptidase (CASP9), ELISA Kit |
| **Full Product Name** | Human Caspase-9, Casp-9 ELISA Kit |
| **Product Gene Name** | CASP9 elisa kit |
| **Product Synonym Names** | Human Caspase-9; Casp-9 ELISA Kit; RP11-265F14.3; APAF-3; APAF3; CASPASE-9c; ICE-LAP6; MCH6; ICE-like apoptotic protease 6; apoptotic protease MCH-6; apoptotic protease activating factor 3; caspase 9; caspase 9; apoptosis-related cystein; caspase 9; apoptosis-related cysteine peptidase |
| **Species Reactivity** | Human |
| **Samples** | Serum, plasma, tissue homogenates, Cell lysates |
| **Detection Range** | 0.78 ng/ml-50 ng/ml |
| **Sensitivity** | 0.195 ng/ml |
| **Specificity** | This assay has high sensitivity and excellent specificity for detection of Human CASP9. No significant cross-reactivity or interference between Human CASP9 and analogues was observed. |
| **Preparation and Storage** | Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions. |
| **Intra-assay Precision** | Intra-assay Precision (Precision within an assay): CV% is less than 8%<br>Three samples of known concentration were tested twenty times on one plate to assess.<br>Inter-assay Precision (Precision between assays): CV% is less than 10%<br>Three samples of known concentration were tested in twenty assays to assess. |
| **Molecular Weight** | 46,281 Da |
| **OMIM** | 602234 |
| **3D Structure** | ModBase 3D Structure for P55211 |
| **Detection Wavelength** | 450 nm |
| **Sample Volume** | 50-100ul |
| **Protein Biological Process 1** | Apoptosis/Autophagy |
| **Protein Biological Process 3** | Apoptosis |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Related Product Information for CASP9 elisa kit** | **Introduction:** Caspase-9 is an initiator caspase, encoded by the CASP9 gene. CASP9 orthologs have been identified in all mammals for which complete genome data are available. Unique orthologs are also present in lizards, lissamphibians, and teleosts. The aspartic acid specific protease caspase-9 has been linked to the mitochondrial death pathway. It is activated during programmed cell death (apoptosis). Induction of stress signalling pathways JNK/SAPK causes release of cytochrome c from mitochondria and activation of apaf-1 (apoptosome), which in turn cleaves the pro-enzyme of caspase-9 into the active form.<br><br>**Principle of the Assay:** The microtiter plate provided in this kit has been pre-coated with an antibody specific to Casp-9. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific for Casp-9 and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain Casp-9, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of Casp-9 in the samples is then determined by comparing the O.D. of the samples to the standard curve. |

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| **Other Notes** | Small volumes of CASP9 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 CASP9 purchase** | MBS704900 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the caspase 9, apoptosis-related cysteine peptidase (CASP9) 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 CASP9. The ELISA analytical biochemical technique of the MBS704900 kit is based on CASP9 antibody-CASP9 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CASP9 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CASP9. 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 CASP9 elisa kit**

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CASP9. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 14790124 |
| **NCBI GeneID** | 842 |
| **NCBI Accession #** | NP_001220.2 |
| **UniProt Primary Accession #** | P55211 |
| **UniProt Secondary Accession #** | O95348; Q53Y70; Q5JRU9; Q5UGI1; Q92852; Q9BQ62; Q9UEQ3; Q9UIJ8; B4E1A3 |
| **UniProt Related Accession #** | P55211 |
| **GenBank Nucleotide #** | NM_001229.4 |
| **NCBI Official Full Name** | caspase-9 isoform alpha |
| **NCBI Official Synonym Full Names** | caspase 9, apoptosis-related cysteine peptidase |
| **NCBI Official Symbol** | CASP9 |
| **NCBI Official Synonym Symbols** | MCH6; APAF3; APAF-3; PPP1R56; ICE-LAP6 |
| **UniProt Protein Name** | Caspase-9 |
| **UniProt Synonym Protein Names** | Apoptotic protease Mch-6; Apoptotic protease-activating factor 3; APAF-3; ICE-like apoptotic protease 6; ICE-LAP6 |
| **Protein Family** | Caspase |
| **UniProt Gene Name** | CASP9 |
| **UniProt Synonym Gene Names** | MCH6; CASP-9; APAF-3; ICE-LAP6 |
| **UniProt Entry Name** | CASP9_HUMAN |
| **NCBI Protein Information** | caspase-9; apoptotic protease MCH-6; ICE-like apoptotic protease 6; apoptotic protease activating factor 3; protein phosphatase 1, regulatory subunit 56 |

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| **NCBI Summary for CASP9** | 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 which undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein can undergo autoproteolytic processing and activation by the apoptosome, a protein complex of cytochrome c and the apoptotic peptidase activating factor 1; this step is thought to be one of the earliest in the caspase activation cascade. This protein is thought to play a central role in apoptosis and to be a tumor suppressor. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2013] |
| **UniProt Comments for CASP9** | **Function:** Involved in the activation cascade of caspases responsible for apoptosis execution. Binding of caspase-9 to Apaf-1 leads to activation of the protease which then cleaves and activates caspase-3. Promotes DNA damage-induced apoptosis in a ABL1/c-Abl-dependent manner. Proteolytically cleaves poly(ADP-ribose) polymerase (PARP).2 PublicationsManual assertion based on experiment in:Ref.17<br><br>**Catalytic activity:** Strict requirement for an Asp residue at position P1 and with a marked preference for His at position P2. It has a preferred cleavage sequence of Leu-Gly-His-Asp-\|-Xaa.1 PublicationManual assertion based on experiment in:Ref.24<br><br>**Enzyme regulation:** Inhibited by the effector protein NleF that is produced by pathogenic E.coli; this inhibits apoptosis.1 PublicationManual assertion based on experiment in:Ref.24 |
| **Research Articles on CASP9** | **1.** overexpression of iASPP and the low expression of caspase-9 in esophageal cancer are closely correlated with tumor invasion and metastasis |
| **Precautions** | All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines. |
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