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Caspase-8 Antibody (Clone C502S)

Mouse Monoclonal Antibody
Catalog # ABV10203

Specification

Caspase-8 Antibody (Clone C502S) - Product Information

Application	**WB, IP**
Primary Accession	O89110
Other Accession	BC006737
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**55357**

Caspase-8 Antibody (Clone C502S) - Additional Information

Gene ID 12370

Application & Usage	**Western blotting (0.5-4 µg/ml) and immunoprecipitation (10 µg/ml). However, the optimal conditions should be determined individually. Detects the 10 kDa small subunit of caspase-8. The antibody does not detect the full-length of caspase-8.**

Other Names
CASP8 , MGC78473 , CASP-8, MACH, procaspase-8, MCH5, ALPS2B, FLICE, CAP4, EC 3.4.22.61

Target/Specificity
Caspase-8 (Active)

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (200 µg/ml) affinity purified antibody in PBS containing 50% glycerol, 1% BSA, and 0.02% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Caspase-8 Antibody (Clone C502S) is for research use only and not for use in diagnostic or therapeutic procedures.

Caspase-8 Antibody (Clone C502S) - Protein Information

Name CASP8

Function
Thiol protease that plays a key role in programmed cell death by acting as a molecular switch for apoptosis, necroptosis and pyroptosis, and is required to prevent tissue damage during embryonic development and adulthood (PubMed:12065591, PubMed:18455983, PubMed:30361383, PubMed:30381458, PubMed:31511692, PubMed:31748744, PubMed:33397971). Initiator protease that induces extrinsic apoptosis by mediating cleavage and activation of effector caspases responsible for FAS/CD95-mediated and TNFRSF1A-induced cell death (PubMed:9654089, PubMed:9837723, PubMed:24813849, PubMed:24813850). Cleaves and activates effector caspases CASP3, CASP4, CASP6, CASP7, CASP9 and CASP10 (By similarity). Binding to the adapter molecule FADD recruits it to either receptor FAS/CD95 or TNFRSF1A (PubMed:29440439). The resulting aggregate called the death-inducing signaling complex (DISC) performs CASP8 proteolytic activation (By similarity). The active dimeric enzyme is then liberated from the DISC and free to activate downstream apoptotic proteases (By similarity). Proteolytic fragments of the N-terminal propeptide (termed CAP3, CAP5 and CAP6) are likely retained in the DISC (By similarity). In addition to extrinsic apoptosis, also acts as a negative regulator of necroptosis: acts by cleaving RIPK1 at 'Asp-325', which is crucial to inhibit RIPK1 kinase activity, limiting TNF-induced apoptosis, necroptosis and inflammatory response (PubMed:31511692). Also able to initiate pyroptosis by mediating cleavage and activation of gasdermin-C and -D (GSDMC and GSDMD, respectively): gasdermin cleavage promotes release of the N- terminal moiety that binds to membranes and forms pores, triggering pyroptosis (PubMed:30361383, PubMed:30381458). Initiates pyroptosis following inactivation of MAP3K7/TAK1 (PubMed:30361383, PubMed:30381458). Also acts as a regulator of innate immunity by mediating cleavage and inactivation of N4BP1 downstream of TLR3 or TLR4, thereby promoting cytokine production (PubMed:32971525). May participate in the Granzyme B (GZMB) cell death pathways (By similarity). Cleaves PARP1 and PARP2 (PubMed:12065591).

Cellular Location
Cytoplasm. Nucleus. Note=Translocates into the nucleus during apoptosis.

Tissue Location

Expressed in a wide variety of tissues. Highest expression in spleen, thymus, lung, liver and kidney. Lower expression in heart, brain, testis and skeletal muscle

Caspase-8 Antibody (Clone C502S) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Caspase-8 Antibody (Clone C502S) - Images

Caspase-8 Antibody (Clone C502S) - Background

Caspase-8, a member of the caspase-family of proteases, plays a key role in mediating Fas (CD95) and TNF induced apoptosis. Caspase-8 is synthesized as inactive pro-enzyme and activation of the enzyme involves proteolytic cleavage that leads to the release of the active p18 and p10 subunits. Activated caspase-8 is able to cleave and activate downstream caspases, such as caspase-3, -6, -7 and a death agonist member of the Bcl-2/Bcl-xL family, Bid, leading to apoptosis.