10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Caspase 8 Antibody

Catalog # ABO12022

Product Information

Application	WB
Primary Accession	O89110
Host	Rabbit
Reactivity	Mouse
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Caspase-8(CASP8) detection. Tested with WB in Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	12370
Other Names	Caspase-8, CASP-8, 3.4.22.61, Caspase-8 subunit p18, Caspase-8 subunit p10, Casp8
Calculated MW	55357
Application Details	Western blot, 0.1-0.5 □g/ml, Mouse
Subcellular Localization	Cytoplasm.
Tissue Specificity	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.
Source	Eukaryota
Protein Name	Caspase-8
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived mouse Caspase 8 recombinant protein (Position: S388-P480). Mouse Caspase 8 shares 83% amino acid (aa) sequence identity with human Caspase 8.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also

	be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the peptidase C14A family.

Protein Information

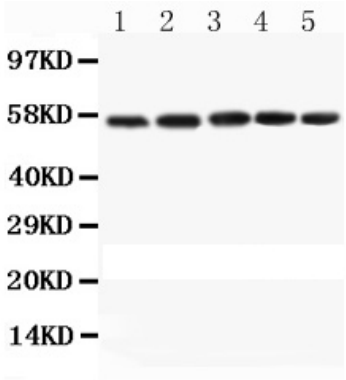
Name	CASP8
Function	Thiol protease that plays a key role in programmed cell death by acting as a molecular switch for apoptosis, necroptosis and pyroptosis, and is required to prevent tissue damage during embryonic development and adulthood (PubMed:12065591, PubMed:18455983, PubMed:30361383, PubMed:30381458, PubMed:31511692, PubMed:31748744, PubMed:33397971, PubMed:9727491, PubMed:9727492). 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:24813849, PubMed:24813850, PubMed:9654089, PubMed:9837723). 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). Also cleaves and activates BID, thereby promoting cytochrome C release from mitochrondria (PubMed:9727491, PubMed:9727492). 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

Background

CASP8 is also known as CAP4, MACH or MCH5. 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.

Images



Anti- Caspase 8 Picoband antibody, ABO12022, Western blottingAll lanes: Anti Caspase 8 (ABO12022) at 0.5ug/mlLane 1: Mouse Spleen Tissue Lysate at 50ugLane 2: Mouse Thymus Tissue Lysate at 50ugLane 3: Mouse Kidney Tissue Lysate at 50ugLane 4: Mouse Lung Tissue Lysate at 50ugLane 5: HEPA Cell Lysate at 40ugPredicted bind size: 55KDObserved bind size: 55KD