10320 Camino Santa Fe, Suite G
San Diego, CA 92121
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Anti-Caspase 8 Picoband Antibody

Catalog # ABO10010

Specification

Anti-Caspase 8 Picoband Antibody - Product Information

Application	**WB, IHC**
Primary Accession	Q14790
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Caspase-8(CASP8) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Caspase 8 Picoband Antibody - Additional Information

Gene ID 841

Other Names
Caspase-8, CASP-8, 3.4.22.61, 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, Caspase-8 subunit p18, Caspase-8 subunit p10, CASP8, MCH5

Calculated MW
55391 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Cytoplasm.

Tissue Specificity
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.

Protein Name
Caspase-8

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the N-terminus of human Caspase 8 (410-449aa VSYRNPAEGTWYIQSLCQSLRERCPRGDDILTILTEVNYE), different from the related mouse and rat sequences by seven amino acids.

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.**

Anti-Caspase 8 Picoband Antibody - Protein Information

Name CASP8 {ECO:0000303|PubMed:9931493, ECO:0000312|HGNC:HGNC:1509}

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:23516580, PubMed:35338844, PubMed:35446120, PubMed:8681376, PubMed:8681377, PubMed:8962078, PubMed:9006941, PubMed:9184224). 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:23516580, PubMed:35338844, PubMed:35446120, PubMed:8681376, PubMed:8681377, PubMed:8962078, PubMed:9006941, PubMed:9184224). Cleaves and activates effector caspases CASP3, CASP4, CASP6, CASP7, CASP9 and CASP10 (PubMed:16916640, PubMed:8962078, PubMed:9006941). Binding to the adapter molecule FADD recruits it to either receptor FAS/TNFRSF6 or TNFRSF1A (PubMed:8681376, PubMed:8681377). The resulting aggregate called the death-inducing signaling complex (DISC) performs CASP8 proteolytic activation (PubMed:9184224). The active dimeric enzyme is then liberated from the DISC and free to activate downstream apoptotic proteases (PubMed:9184224). Proteolytic fragments of the N-terminal propeptide (termed CAP3, CAP5 and CAP6) are likely retained in the DISC (PubMed:<a

href="http://www.uniprot.org/citations/9184224" target="_blank">9184224). In addition to extrinsic apoptosis, also acts as a negative regulator of necroptosis: acts by cleaving RIPK1 at 'Asp-324', which is crucial to inhibit RIPK1 kinase activity, limiting TNF-induced apoptosis, necroptosis and inflammatory response (PubMed:31827280, PubMed:31827281). 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:32929201, PubMed:34012073). Initiates pyroptosis following inactivation of MAP3K7/TAK1 (By similarity). Also acts as a regulator of innate immunity by mediating cleavage and inactivation of N4BP1 downstream of TLR3 or TLR4, thereby promoting cytokine production (By similarity). May participate in the Granzyme B (GZMB) cell death pathways (PubMed:8755496). Cleaves PARP1 and PARP2 (PubMed:8681376). Independent of its protease activity, promotes cell migration following phosphorylation at Tyr-380 (PubMed:18216014, PubMed:27109099).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:Q9JHX4}. Nucleus {ECO:0000250|UniProtKB:Q9JHX4}. Cell projection, lamellipodium. Note=Recruitment to lamellipodia of migrating cells is enhanced by phosphorylation at Tyr-380

Tissue Location
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

Anti-Caspase 8 Picoband Antibody - 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

Anti-Caspase 8 Picoband Antibody - Images

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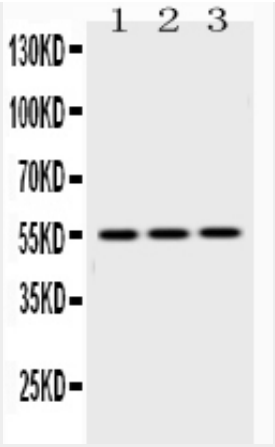
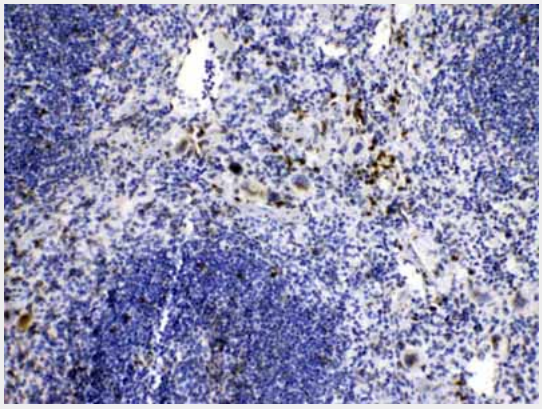
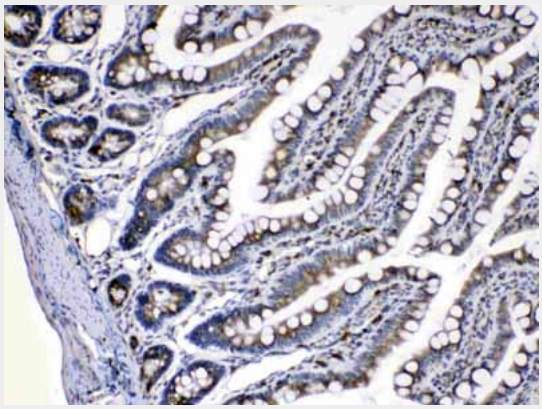


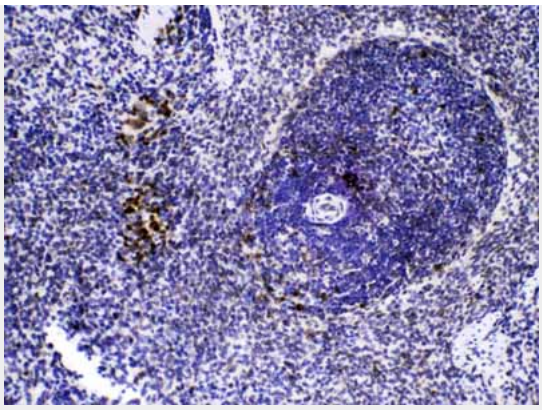
Western blot analysis of Caspase8 expression in rat liver extract (lane 1), mouse liver extract (lane 2) and HEPG2 whole cell lysates (lane 3). Caspase8 at 55KD was detected using rabbit anti-Caspase8 Antigen Affinity purified polyclonal antibody (Catalog # ABO10010) at 0.5 Î¼g/mL. The blot was developed using chemiluminescence (ECL) method .



Caspase8 was detected in paraffin-embedded sections of mouse spleen tissues using rabbit anti-Caspase8 Antigen Affinity purified polyclonal antibody (Catalog # ABO10010) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .



Caspase8 was detected in paraffin-embedded sections of rat intestine tissues using rabbit anti-Caspase8 Antigen Affinity purified polyclonal antibody (Catalog # ABO10010) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .



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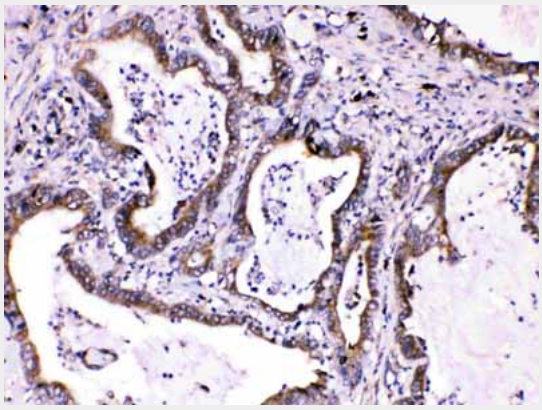
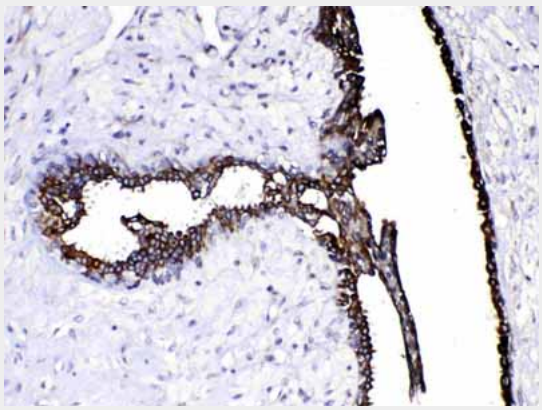


Caspase8 was detected in paraffin-embedded sections of human intestinal cancer tissues using rabbit anti- Caspase8 Antigen Affinity purified polyclonal antibody (Catalog # ABO10010) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .



Caspase8 was detected in paraffin-embedded sections of human mammary cancer tissues using rabbit anti- Caspase8 Antigen Affinity purified polyclonal antibody (Catalog # ABO10010) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .

Anti-Caspase 8 Picoband Antibody - 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. In addtion, 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.