

# Anti-Caspase 8 (pY380) Antibody

Rabbit polyclonal antibody to Caspase 8 (pY380) Catalog # AP59500

## **Product Information**

Application	WB
Primary Accession	<u>Q14790</u>
Reactivity	Human, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55391

#### **Additional Information**

Gene ID	841
Other Names	MCH5; Caspase-8; CASP-8; 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
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Caspase 8. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

## **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: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: <u>8681376</u> , PubMed: <u>8681377</u> ). The resulting aggregate called the death-inducing signaling complex (DISC) performs CASP8 proteolytic activation (PubMed: <u>9184224</u> ). The active dimeric enzyme is then liberated from the DISC and free to activate downstream apoptotic proteases (PubMed: <u>9184224</u> ). Proteolytic fragments of the N-terminal propeptide (termed CAP3, CAP5 and CAP6) are likely retained in the DISC (PubMed: <u>9184224</u> ). 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: <u>31827280</u> , PubMed: <u>31827281</u> ). 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: <u>32929201</u> , PubMed: <u>34012073</u> ). 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: <u>8755496</u> ). Cleaves PARP1 and PARP2 (PubMed: <u>8681376</u> ). Independent of its protease activity, promotes cell migration following phosphorylation at Tyr-380 (PubMed: <u>18216014</u> , PubMed: <u>27109099</u> ).
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

## Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Caspase 8. The exact sequence is proprietary.

#### Images



Western blot analysis of Caspase 8 (pY380) expression in HepG2 (A), Jurkat (B), mouse spleen (C) whole cell lysates.

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