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KD-Validated Anti-Caspase 8 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1853

Specification

KD-Validated Anti-Caspase 8 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q14790
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 55 kDa, observed, 55 kDa KDa**
Gene Name	**CASP8**
Aliases	**CASP8; Caspase 8; FLICE; MCH5; MACH; Casp-8; Caspase 8, Apoptosis-Related Cysteine Peptidase; Caspase 8, Apoptosis-Related Cysteine Protease; MORT1-Associated Ced-3 Homolog; ICE-Like Apoptotic Protease 5; Apoptotic Cysteine Protease; Apoptotic Protease Mch-5; FADD-Like ICE; Caspase-8; CAP4; FADD-Homologous ICE/CED-3-Like Protease; FADD-Homologous ICE/Ced-3-Like Protease; MACH-Beta-1/2/3/4 Protein; MACH-Alpha-1/2/3 Protein; EC 3.4.22.61; ALPS2B; CASP-8**
Immunogen	**A synthesized peptide derived from human Caspase-8**

KD-Validated Anti-Caspase 8 Rabbit Monoclonal 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 {ECO:0000303|PubMed:9931493, ECO:0000312|HGNC:HGNC:1509}

KD-Validated Anti-Caspase 8 Rabbit Monoclonal 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:<a href="http://www.uniprot.org/citations/35338844"

target="_blank">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: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

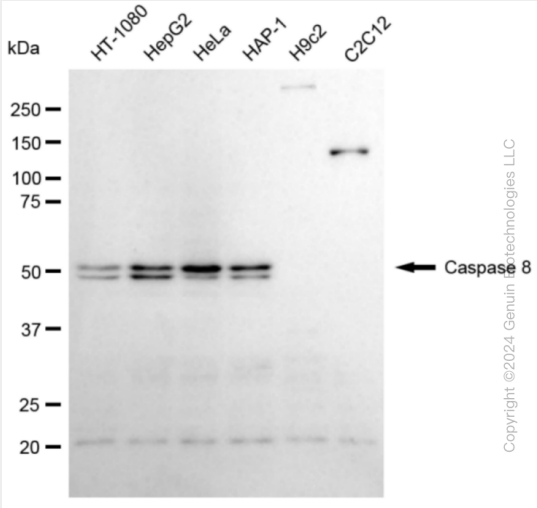
Isoform 1, isoform 5 and isoform 7 are expressed in a wide variety of tissues. Highest expression in peripheral blood leukocytes, spleen, thymus and liver. Barely detectable in brain, testis and skeletal muscle

KD-Validated Anti-Caspase 8 Rabbit Monoclonal Antibody - Protocols

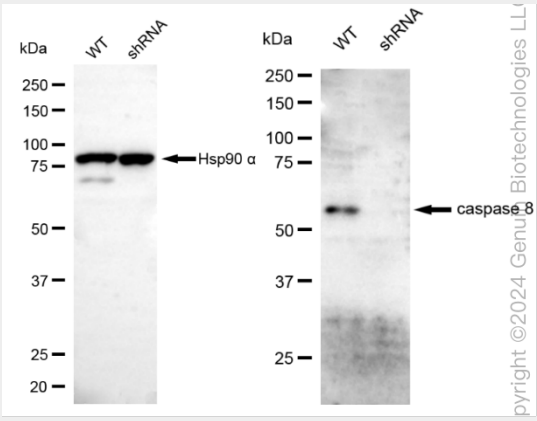
Provided below are standard protocols that you may find useful for product applications.

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

KD-Validated Anti-Caspase 8 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-caspase 8 antibody (Cat#AGI1853). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-caspase 8 antibody (Cat#AGI1853, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



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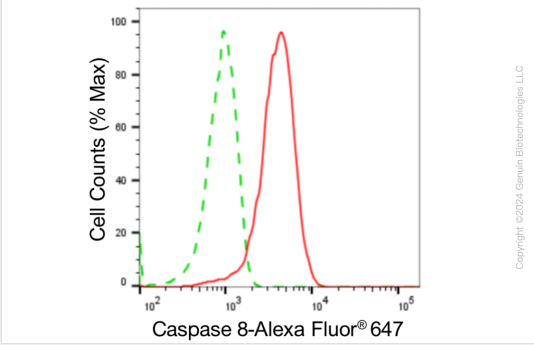
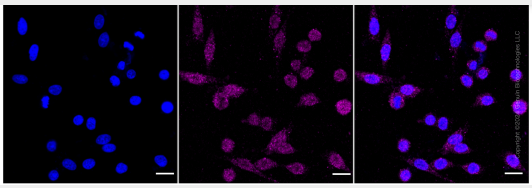
Western blotting analysis using anti-caspase 8 antibody (Cat#AGI1853). Caspase 8 expression in wild type (WT) and caspase 8 (CASP8) shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-caspase 8 antibody (Cat#AGI1853, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Caspase 8 expression in HepG2 cells using anti-Caspase 8 antibody (Cat#AGI1853, 1:2,000). Green, isotype control; red,Caspase 8.



Immunocytochemical staining of HepG2 cells with anti-caspase 8 antibody (Cat#AGI1853, 1:1,000). Nuclei were stained blue with DAPI; Caspase 8 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.