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KD-Validated Anti-Caspase 6 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1563

Specification

KD-Validated Anti-Caspase 6 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P55212
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 33 kDa , observed, 34 kDa KDa**
Gene Name	**CASP6**
Aliases	**CASP6; Caspase 6; CSP-6; MCH2; Caspase-6; Caspase 6, Apoptosis-Related Cysteine Peptidase; Caspase 6, Apoptosis-Related Cysteine Protease; Mammalian Ced-3 Homologue; EC 3.4.22.59; Apoptotic Protease MCH-2; Apoptotic Protease Mch-2; CASPASE-6; EC 3.4.22; CASP-6**
Immunogen	**A synthesized peptide derived from human Caspase-6**

KD-Validated Anti-Caspase 6 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**839**

Other Names
Caspase-6, CASP-6, CSP-6, 3.4.22.59, Apoptotic protease Mch-2, Caspase-6 subunit p18, Caspase-6 subunit p20, Caspase-6 subunit p11, Caspase-6 subunit p10, CASP6 (HGNC:1507)

KD-Validated Anti-Caspase 6 Rabbit Monoclonal Antibody - Protein Information

Name CASP6 (HGNC:1507)

Function
Cysteine protease that plays essential roles in programmed cell death, axonal degeneration, development and innate immunity (PubMed:19133298, PubMed:22858542, PubMed:27032039, PubMed:28864531, PubMed:30420425, PubMed:32298652, PubMed:8663580). Acts as a non- canonical executioner caspase during apoptosis: localizes in the nucleus and cleaves the nuclear structural protein NUMA1 and lamin A/LMNA

thereby inducing nuclear shrinkage and fragmentation (PubMed:11953316, PubMed:17401638, PubMed:8663580, PubMed:9463409). Lamin-A/LMNA cleavage is required for chromatin condensation and nuclear disassembly during apoptotic execution (PubMed:11953316). Acts as a regulator of liver damage by promoting hepatocyte apoptosis: in absence of phosphorylation by AMP-activated protein kinase (AMPK), catalyzes cleavage of BID, leading to cytochrome c release, thereby participating in nonalcoholic steatohepatitis (PubMed:32029622). Cleaves PARK7/DJ-1 in cells undergoing apoptosis (By similarity). Involved in intrinsic apoptosis by mediating cleavage of RIPK1 (PubMed:22858542). Furthermore, cleaves many transcription factors such as NF-kappa-B and cAMP response element-binding protein/CREBBP (PubMed:10559921, PubMed:14657026). Cleaves phospholipid scramblase proteins XKR4 and XKR9 (By similarity). In addition to apoptosis, involved in different forms of programmed cell death (PubMed:32298652). Plays an essential role in defense against viruses by acting as a central mediator of the ZBP1-mediated pyroptosis, apoptosis, and necroptosis (PANoptosis), independently of its cysteine protease activity (PubMed:32298652). PANoptosis is a unique inflammatory programmed cell death, which provides a molecular scaffold that allows the interactions and activation of machinery required for inflammasome/pyroptosis, apoptosis and necroptosis (PubMed:32298652). Mechanistically, interacts with RIPK3 and enhances the interaction between RIPK3 and ZBP1, leading to ZBP1-mediated inflammasome activation and cell death (PubMed:32298652). Plays an essential role in axon degeneration during axon pruning which is the remodeling of axons during neurogenesis but not apoptosis (By similarity). Regulates B-cell programs both during early development and after antigen stimulation (By similarity).

Cellular Location
Cytoplasm. Nucleus

KD-Validated Anti-Caspase 6 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 6 Rabbit Monoclonal Antibody - Images

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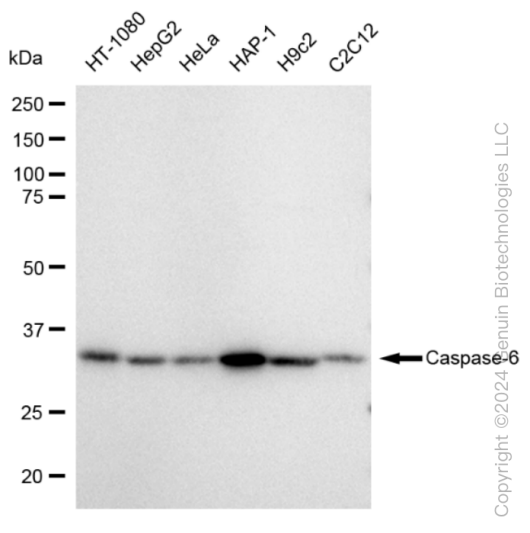
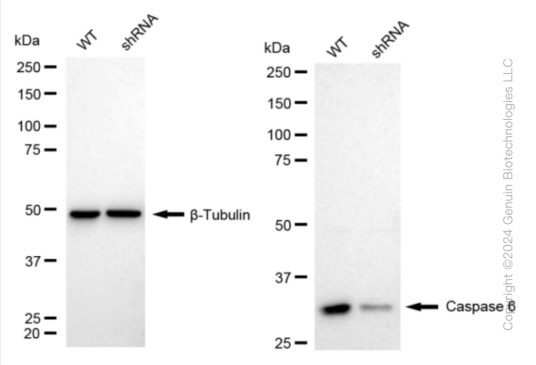
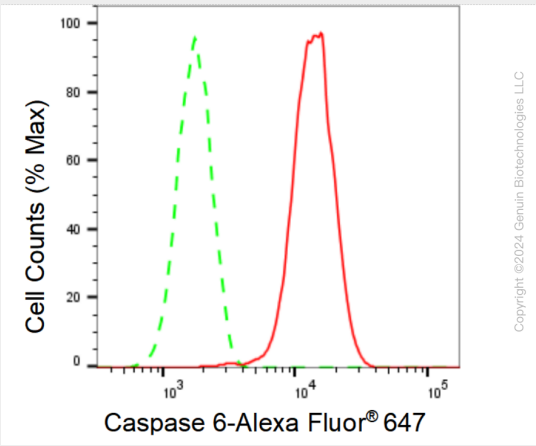


Western blotting analysis using anti-Caspase 6 antibody (Cat#AGI1563). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Caspase 6 antibody (Cat#AGI1563, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-caspase 6 antibody (Cat#AGI1563). Caspase 6 expression in wild-type (WT) and caspase 6 (CASP6) shRNA knockdown (KD) C2C12 cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-caspase 6 antibody (Cat#AGI1563, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Caspase 6 expression in HT-1080 cells using Caspase 6 antibody (Cat#AGI1563, 1:2,000). Green, isotype control; red, Caspase 6.

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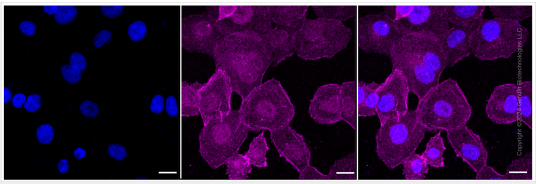

Immunocytochemical staining of HT-1080 cells with Caspase 6 antibody (Cat#AGI1563, 1:1,000). Nuclei were stained blue with DAPI; Caspase 6 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.