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CASP5 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10944b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P51878
Other Accession	NP_001129582.1, NP_001129584.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18988
Calculated MW	49736
Antigen Region	162-191

Additional Information

Gene ID	838
Other Names	Caspase-5, CASP-5, ICE(rel)-III, Protease ICH-3, Protease TY, Caspase-5 subunit p20, Caspase-5 subunit p10, CASP5, ICH3
Target/Specificity	This CASP5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 162-191 amino acids from the Central region of human CASP5.
Dilution	WB~~1:2000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CASP5 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CASP5 {ECO:0000303|PubMed:16893518, ECO:0000312|HGNC:HGNC:1506}
Function	Thiol protease that acts as a mediator of programmed cell death (PubMed:28314590, PubMed:29898893). Initiates pyroptosis, a programmed

	lytic cell death pathway through cleavage of Gasdermin-D (GSDMD): cleavage releases the N-terminal gasdermin moiety (Gasdermin- D, N-terminal) that binds to membranes and forms pores, triggering pyroptosis (PubMed:29898893). Also mediates cleavage and maturation of IL18 (PubMed:37993714). Cleavage of GSDMD and IL18 is not strictly dependent on the consensus cleavage site but depends on an exosite interface on CASP4 (PubMed:37993714). During non-canonical inflammasome activation, cuts CGAS and may play a role in the regulation of antiviral innate immune activation (PubMed:28314590).
Tissue Location	Expressed in barely detectable amounts in most tissues except brain, highest levels being found in lung, liver and skeletal muscle.

Background

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 which undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. Overexpression of the active form of this enzyme induces apoptosis in fibroblasts. Max, a central component of the Myc/Max/Mad transcription regulation network important for cell growth, differentiation, and apoptosis, is cleaved by this protein; this process requires Fas-mediated dephosphorylation of Max. The expression of this gene is regulated by interferon-gamma and lipopolysaccharide. Alternatively spliced transcript variants have been identified for this gene.

References

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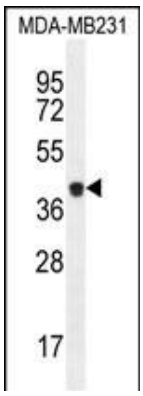
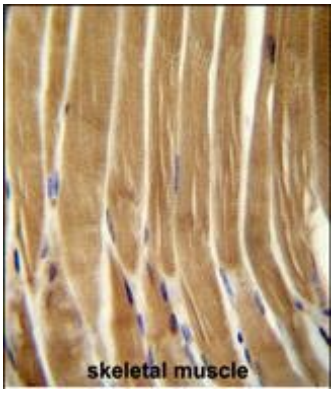
Notaridou, M., et al. Int. J. Cancer (2010) In press :
Kim, M.S., et al. APMIS 118(4):308-312(2010)
Liang, X.S., et al. Br. J. Haematol. 146(4):418-423(2009)
Eckhart, L., et al. Biochem. Biophys. Res. Commun. 348(2):682-688(2006)

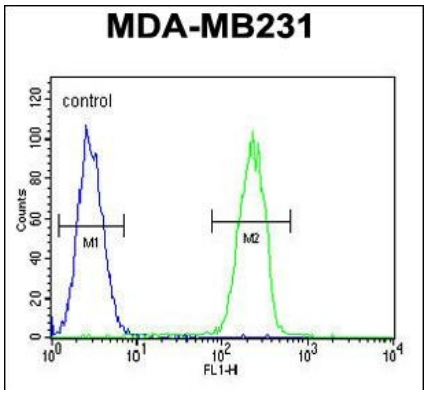
Images



CASP5 Antibody (Center) (Cat. #AP10944b) western blot analysis in MDA-MB231 cell line lysates (35ug/lane).This demonstrates the CASP5 antibody detected the CASP5 protein (arrow).

CASP5 Antibody (Center) (Cat. #AP10944b) immunohistochemistry analysis in formalin fixed and paraffin embedded human skeletal muscle followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the CASP5 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.





CASP5 Antibody (Center) (Cat. #AP10944b) flow cytometric analysis of MDA-MB231 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.