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Caspase-2 Antibody

Catalog # ASC10292

Product Information

Application	WB, ICC, E
Primary Accession	P42575
Other Accession	P42575, 83300977
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	50685
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Caspase-2 antibody can be used for the detection of caspase-2 by Western blot at 0.5 to 2 □g/mL. Antibody can also be used for immunocytochemistry starting at 2 □g/mL.

Additional Information

Gene ID	835
Other Names	Caspase-2 Antibody: ICH1, NEDD2, CASP-2, NEDD-2, PPP1R57, ICH1, Caspase-2, Neural precursor cell expressed developmentally down-regulated protein 2, caspase 2, apoptosis-related cysteine peptidase
Target/Specificity	CASP2; Depending on cell lines or tissues used, other cleavage products may be observed.
Reconstitution & Storage	Caspase-2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Caspase-2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CASP2
Synonyms	ICH1, NEDD2
Function	Is a regulator of the cascade of caspases responsible for apoptosis execution (PubMed:11156409, PubMed:15073321, PubMed:8087842). Might function by either activating some proteins required for cell death or inactivating proteins necessary for cell survival (PubMed:15073321). Associates with PIDD1 and CRADD to form the PIDDosome, a complex that activates CASP2 and triggers

	apoptosis in response to genotoxic stress (PubMed:15073321).
Tissue Location	Expressed at higher levels in the embryonic lung, liver and kidney than in the heart and brain. In adults, higher level expression is seen in the placenta, lung, kidney, and pancreas than in the heart, brain, liver and skeletal muscle

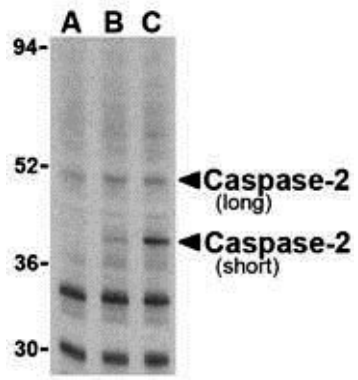
Background

Caspase-2 Antibody: Caspases are a family of cysteine proteases that can be divided into the apoptotic and inflammatory caspase subfamilies. Unlike the apoptotic caspases, members of the inflammatory subfamily are generally not involved in cell death but are associated with the immune response to microbial pathogens. Members of this subfamily include caspase-1, -4, -5, and -12 and can activate proinflammatory cytokines such as IL-1β and IL-18. Although phylogenetically similar to this subfamily, Caspase-2 is thought to be involved in stress-induced apoptosis. Caspase-2 has two major isoforms; overexpression on the long form results in apoptosis while that of the short form suppresses cell death.

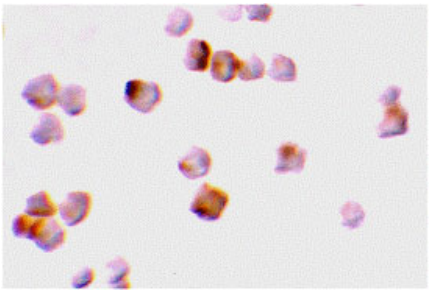
References

Martinon F and Tschopp J. Inflammatory caspases: linking an intracellular innate immune system to autoinflammatory diseases. Cell 2004; 117:561-74.
Zhivotovsky B and Orrenius S. Caspase-2 funtion in response to DNA damage. Biochim. Biophys. Res. Comm. 2005; 331:859-67.
Kuida K, Lippke JA, Ku G, et al. Altered cytokine export and apoptosis in mice deficient in interleukin-1 β converting enzyme. Science 1995; 267:2000-3.
Gracie JA, Robertson SE, and McInnes IB. Interleukin-18. J. Leukoc. Biol. 2003; 73:213-224.

Images



Western blot analysis of caspase-2 in Ramos cells with caspase-2 antibody at (A) 0.5, (B) 1, and (C) 2 µg/mL.



Immunocytochemistry of caspase-2 in A-20 cells with caspase-2 antibody at 2 µg/mL.