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Smac Antibody

Catalog # ASC10133

Product Information

Application	WB, IF, IP, E, IHC-P
Primary Accession	Q9JIQ3
Other Accession	AF203914, 8953908
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	26820
Conjugate	Unconjugated
Application Notes	Smac antibody can be used for detection of Smac by Western blot at 1 g/mL. A 25 kDa band can be detected. Antibody can also be used for immunohistochemistry starting at 2 g/mL. For immunofluorescence start at 10 g/mL.

Additional Information

Gene ID	66593
Other Names	Smac Antibody: Smac, AU040403, 0610041G12Rik, 1700006L01Rik, Smac, Diablo homolog, mitochondrial, Direct IAP-binding protein with low pI, diablo homolog (Drosophila)
Target/Specificity	Diablo;
Reconstitution & Storage	Smac 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	Smac Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Diablo {ECO:0000312|MGI:MGI:1913843}
Function	Promotes apoptosis by activating caspases in the cytochrome c/Apaf-1/caspase-9 pathway. Acts by opposing the inhibitory activity of inhibitor of apoptosis proteins (IAP). Inhibits the activity of BIRC6/BRUCE by inhibiting its binding to caspases (By similarity).
Cellular Location	Mitochondrion. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q9NR28}. Note=Released into the cytosol in a PARL-dependent manner when cells undergo apoptosis {ECO:0000250|UniProtKB:Q9NR28}

Tissue Location	Highest expression found in heart, liver, kidney and testis.

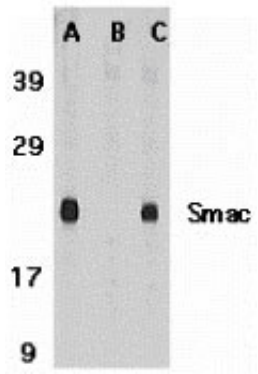
Background

Smac Antibody: The inhibitor of apoptosis proteins (IAPs) regulate programmed cell death by inhibiting members of the caspase family of enzymes. A novel mammalian protein that binds to IAPs and neutralizes the inhibitory effect of IAPs on caspases was recently identified and designated Smac/DIABLO. Smac/DIABLO is a mitochondrial protein that is released along with cytochrome c during apoptosis and activates cytochrome c/Apaf-1/capase-9 pathway. Analysis of the structural basis of Smac/DIABLO reveals that the N-terminal amino acids are required for binding of Smac/DIABLO to IAPs and activation of caspases. Smac/DIABLO is expressed in a variety of human and mouse tissues.

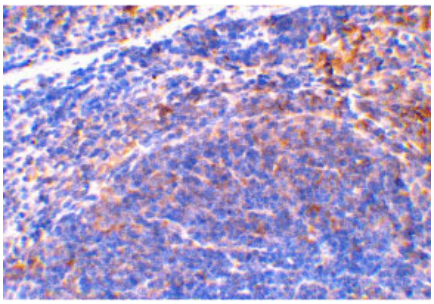
References

Du C, Fang M, Li Y, Li L, Wang X. Smac, a mitochondrial protein that promotes cytochrome c-dependent caspase activation by eliminating IAP inhibition. Cell. 2000;102(1):33-42.
Verhagen AM, Ekert PG, Pakusch M, Silke J, Connolly LM, Reid GE, Moritz RL, Simpson RJ, Vaux DL. Identification of DIABLO, a mammalian protein that promotes apoptosis by binding to and antagonizing IAP proteins. Cell. 2000;102(1):43-53.
Srinivasula SM, Datta P, Fan XJ, Fernandes-Alnemri T, Huang Z, Alnemri ES. Molecular Determinants of the Caspase-promoting Activity of Smac/DIABLO and Its Role in the Death Receptor Pathway. J Biol Chem. 2000;275(46):36152-36157.
Chai J, Du C, Wu JW, Kyin S, Wang X, Shi Y. Structural and biochemical basis of apoptotic activation by Smac/DIABLO. Nature. 2000;406(6798):855-62.

Images

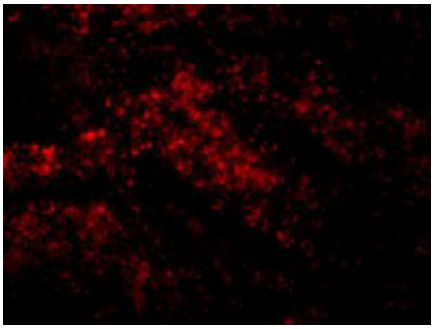


Western blot analysis of Smac in mouse heart tissue lysate in the absence (A) or presence (B) of blocking peptide and in rat heart tissue lysate with Smac antibody at 1 µg /ml.



Immunohistochemical staining of mouse spleen tissue using Smac antibody at 2 µg/mL.

Immunofluorescence of Smac in Mouse Spleen cells with Smac antibody at 10 µg/mL.



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