

**Smac Antibody**  
**Catalog # ASC10132****Specification**

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**Smac Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O9JIO3</a>
Other Accession	<a href="#">NP_063940</a> , <a href="#">66593</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 26 kDa

Application Notes	<b>Observed: 25 kDa KDa</b> Smac antibody can be used for detection of Smac/DIABLO by Western blot at 1 µg/mL. Smac antibody can also be used to detect Smac/DIABLO by immunohistochemistry at 5 µg/mL.
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**Smac Antibody - 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**

Smac antibody was raised against a 15 amino acid peptide near the carboxy terminus of human Smac.<br><br>The immunogen is located within the last 50 amino acids of Smac.

**Reconstitution & Storage**

Smac antibody can be stored at 4°C for three months and -20°C, 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.

**Smac Antibody - 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}

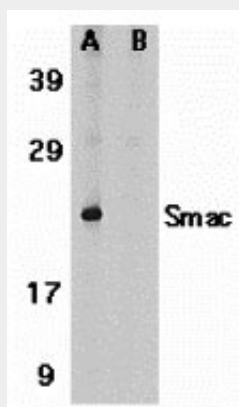
**Tissue Location**

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

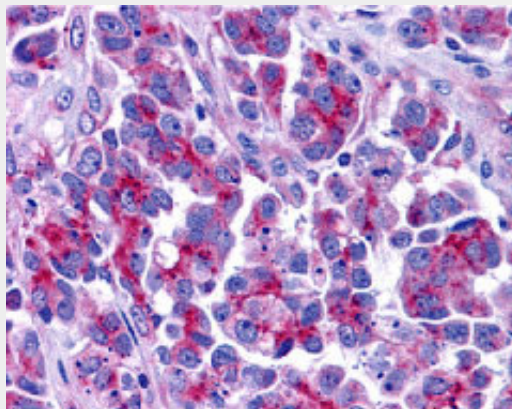
**Smac Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Smac Antibody - Images**

Western blot analysis of Smac in human heart tissue lysate in the absence (A) or presence (B) of blocking peptide (2409P) with Smac antibody at 1 µg/mL.



Immunohistochemistry of Smac/DIABLO in human ovary tissue with Smac antibody at 5 µg/mL.

## **Smac Antibody - 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/caspase-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.

## **Smac Antibody - References**

Du C, Fang M, Li Y, et al. Smac, a mitochondrial protein that promotes cytochrome c-dependent caspase activation by eliminating IAP inhibition. *Cell* 2000; 102:33-42.  
Verhagen AM, Ekert PG, Pakusch M, et al. Identification of DIABLO, a mammalian protein that promotes apoptosis by binding to and antagonizing IAP proteins. *Cell* 2000;102:43-53.  
Srinivasula SM, Datta P, Fan XJ, et al. Molecular Determinants of the Caspase-promoting Activity of Smac/DIABLO and Its Role in the Death Receptor Pathway. *J. Biol. Chem.* 2000; 275:36152-7.  
Chai J, Du C, Wu JW, et al. Structural and biochemical basis of apoptotic activation by Smac/DIABLO. *Nature* 2000; 406:855-62.