

Smac Rabbit pAb

Smac Rabbit pAb Catalog # AP52328

Product Information

Application IHC-P, IHC-F, IF, E

Primary Accession Q9NR28

Reactivity Rat, Pig, Chicken, Dog

Host Rabbit
Clonality Polyclonal
Calculated MW 27131
Physical State Liquid

Immunogen KLH conjugated synthetic peptide derived from human Smac

Epitope Specificity 131-239/239

Isotype IgG

Purity affinity purified by Protein A

Buffer

SUBCELLULAR LOCATION

SUBUNIT

0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Mitochondrion. Note=Released into the cytosol when cells undergo apoptosis. Homodimer. Interacts with NGFRAP1/BEX3 (By similarity). Interacts with BIRC2/c-IAP1, BIRC3/c-IAP2, XIAP/BIRC4, BIRC6/bruce and BIRC7/livin. Interacts with the monomeric and dimeric form of BIRC5/survivin. Ubiquitinated by BIRC7/livin.

Post-translational modifications DISEASE

non-syndromic sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information. Note=The disease is caused by mutations affecting the gene represented in this entry. This product as supplied is intended for research use only, not for use in

Deafness, autosomal dominant, 64 (DFNA64) [MIM:614152]: A form of

human, therapeutic or diagnostic applications.

Important Note

Background Descriptions

bs-1298P is one synthetic peptide derived from human Smac. This gene encodes an inhibitor of apoptosis protein (IAP)-binding protein. The encoded mitochondrial protein enters the cytosol when cells undergo apoptosis, and it moderates the caspase inhibition of IAPs. Multiple polyadenylation sites have been found for this gene. Several alternatively spliced transcript variants that encode distinct isoforms have been described for this gene but the validity of some transcripts, and their predicted ORFs, has not been determined conclusively. The inhibitor of apoptosis (IAP) proteins regulate programmed cell death by inhibiting members of the caspase family of enzymes. A novel mammalian protein that binds to IAPs and neutralizes their inhibitory effect on caspases has been designated Smac/DIABLO. This is a mitochondrial protein that is released along with cytochrome c during apoptosis and activates the 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.

Additional Information

Gene ID 56616

Other Names Diablo IAP-binding mitochondrial protein {ECO:0000312|HGNC:HGNC:21528},

Diablo homolog, mitochondrial {ECO:0000312 | HGNC:HGNC:21528}, Direct IAP-binding protein with low pI {ECO:0000312 | HGNC:HGNC:21528}, Second mitochondria-derived activator of caspases, SMAC, Diablo IAP-binding

mitochondrial protein, cleaved form, DIABLO (HGNC:21528)

Target/Specificity Ubiquitously expressed with highest expression in testis. Expression is also

high in heart, liver, kidney, spleen, prostate and ovary. Low in brain, lung, thymus and peripheral blood leukocytes. Isoform 3 is ubiquitously expressed.

Dilution IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000

Storage Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When

reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

Protein Information

Name DIABLO (HGNC:21528)

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 (PubMed: 15200957, PubMed: 36758104,

PubMed:36758105, PubMed:36758106).

Cellular Location Mitochondrion. Cytoplasm, cytosol Note=Released into the cytosol in a

PARL-dependent manner when cells undergo apoptosis.

Tissue Location Ubiquitously expressed with highest expression in testis. Expression is also

high in heart, liver, kidney, spleen, prostate and ovary. Low in brain, lung, thymus and peripheral blood leukocytes. Isoform 3 is ubiquitously expressed

Background

bs-1298P is one synthetic peptide derived from human Smac. This gene encodes an inhibitor of apoptosis protein (IAP)-binding protein. The encoded mitochondrial protein enters the cytosol when cells undergo apoptosis, and it moderates the caspase inhibition of IAPs. Multiple polyadenylation sites have been found for this gene. Several alternatively spliced transcript variants that encode distinct isoforms have been described for this gene but the validity of some transcripts, and their predicted ORFs, has not been determined conclusively. The inhibitor of apoptosis (IAP) proteins regulate programmed cell death by inhibiting members of the caspase family of enzymes. A novel mammalian protein that binds to IAPs and neutralizes their inhibitory effect on caspases has been designated Smac/DIABLO. This is a mitochondrial protein that is released along with cytochrome c during apoptosis and activates the 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.

References

Du C., et al. Cell 102:33-42(2000).

Srinivasula S.M.,et al.J. Biol. Chem. 275:36152-36157(2000). Fu J.,et al.J. Biol. Chem. 278:52660-52672(2003). Ota T.,et al.Nat. Genet. 36:40-45(2004). Scherer S.E.,et al.Nature 440:346-351(2006).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.