



Rabbit Anti-Smac antibody

SL0667R

Product Name Smac**Chinese Name** Mitochondrion 促凋亡蛋白抗体**Alias** Smac / Diablo; 0610041G12Rik; DBLOH_HUMAN; DBOH; DBOH; diablo; Diablo homolog (Drosophila); Diablo homolog (Drosophila); Diablo homolog; Diablo homolog Drosophila; Diablo homolog mitochondrial; Diablo homolog mitochondrial precursor; DIABLO S; DIABLO S; DIABLOS; Direct IAP binding protein with low pI; Direct IAP-binding protein with low pI; FLJ10537; FLJ25049; mitochondrial; Mitochondrial Smac protein; Second Mitochondria Derived Activator of Caspase; Second mitochondria-derived activator of caspase; SMAC 3; smac; Smac protein; SMAC3.**Research Area** Tumour Cell biology Apoptosis The new supersedes the old Mitochondrion**Immunogen Species** Rabbit**Clonality** Polyclonal**React Species** Human, Mouse, (predicted: Rat,)
WB=1:500-2000,ICC/IF=1:100-500**Applications** not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.**Theoretical molecular weight** 21kDa**Cellular localization** cytoplasmic Mitochondrion**Form** Liquid**Concentration** 1mg/ml**immunogen** KLH conjugated synthetic peptide derived from human Smac: 151-239/239**Lsotype** IgG**Purification** affinity purified by Protein A**Buffer Solution** Preservative: 15mM Sodium Azide, Constituents: 1% BSA, 1M PBS, pH 7.4**Storage** Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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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.

Product Detail

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. Isoform 3 attenuates the stability and apoptosis-inhibiting activity of XIAP/BIRC4 by promoting XIAP/BIRC4 ubiquitination and degradation through the ubiquitin-proteasome pathway. Isoform 3 also disrupts XIAP/BIRC4 interacting with processed caspase-9 and promotes caspase-3 activation. Isoform 1 is defective in the capacity to down-regulate the XIAP/BIRC4 abundance.

Subunit:

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.

Subcellular Location:

Mitochondrion. Note=Released into the cytosol when cells undergo apoptosis.

Tissue 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.

Post-translational modifications:

Ubiquitinated by BIRC7/livin.

DISEASE:

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

SWISS:

Q9NR28

Gene ID:

56616

Database links:

[Entrez Gene: 56616](#) Human

[Entrez Gene: 66593](#) Mouse

[Entrez Gene: 288753](#) Rat

[Omim: 605219](#) Human

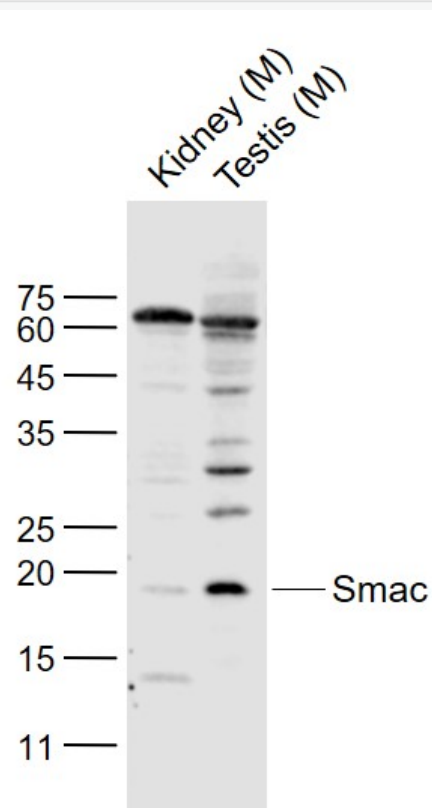
[SwissProt: Q9NR28](#) Human

[SwissProt: Q9JIQ3](#) Mouse

[Unigene: 169611](#) Human

[Unigene: 46716](#) Mouse

**Product
Picture**



Sample:

Lane 1: Kidney (Mouse) Lysate at 40 ug

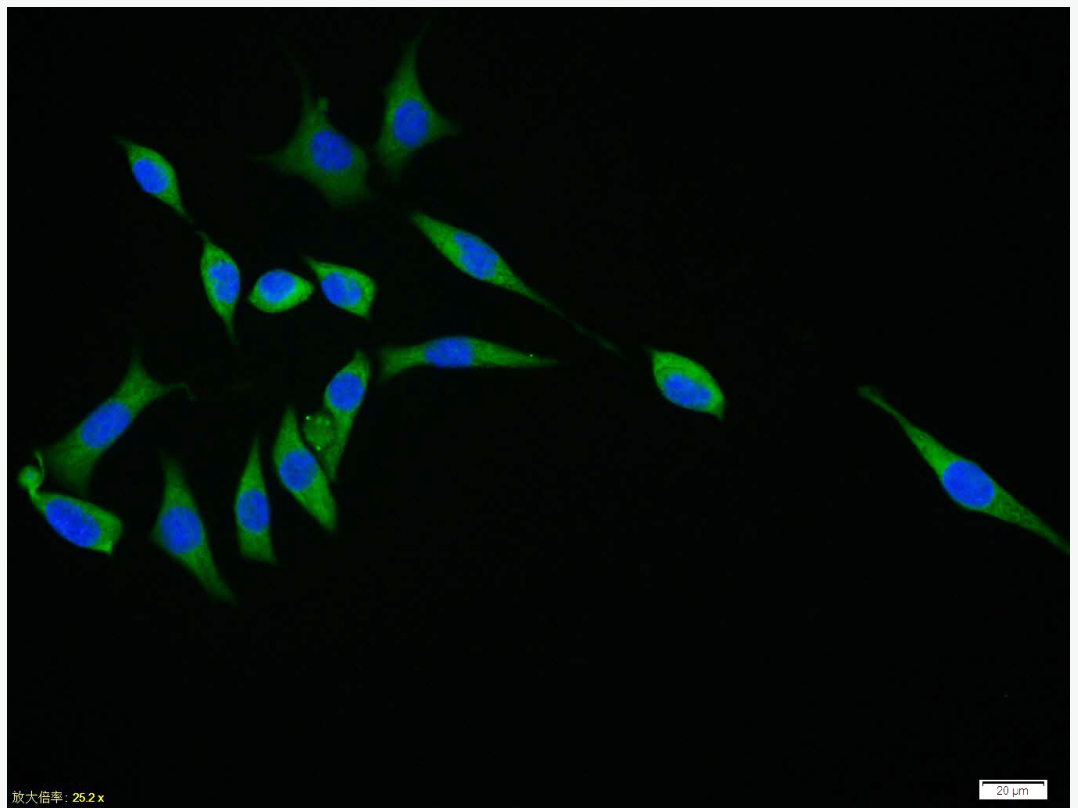
Lane 2: Testis (Mouse) Lysate at 40 ug

Primary: Anti-alpha smooth muscle Actin (SL10196R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 21 kD

Observed band size: 19 kD



Tissue/cell:SH-SY5Y cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Antibody incubation with (Smac) polyclonal Antibody, Unconjugated (SL0667R) 1:100, 90 minutes at 37°C; followed by a FITC conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.