

## SMAC/DIABLO Human

**Description:** Smac/Diablo Human Recombinant fused to N-terminal T7-Tag produced in E.Coli is a single, non-glycosylated polypeptide chain containing 199 amino acids and having a molecular mass of 22 kDa.

Catalog #: PRPS-621

**Synonyms:** Diablo homolog mitochondrial, Second mitochondria-derived activator of caspase, Smac protein, Direct IAP-binding protein with low pI, DIABLO, SMAC, SMAC3, DIABLO-S, FLJ10537, FLJ25049.

For research use only.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MASMTGGQQM GRGSMAPVIA QKSEPHSLSS EALMRRVSL  
VTDSTSTFLS QTTYALIEAI TEYTKAVYTL TSLYRQYTSI LGKMNSEED EVWQVIIGAR  
AEMTSKHQEY LKLETTWMTA VGLSEMAAEA AYQTGADQAS ITARNHIQLV KLQVEEVHQL  
SRKAETKLAE AQIEELRQKT QEEGEERAES EQEAYLRED.

**Purity:** Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

### Formulation:

The Smac/Diablo solution contains 20mM Tris pH-7.5.

### Stability:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

Smac/Diablo is a proapoptotic protein that increases caspase activation in the cytochrome c/Apaf-1/caspase-9 pathway by its binding to the inhibitor of apoptosis proteins (IAPs) and removing their inhibitory activity. Smac/Diablo is a mitochondrial protein which enters the cytosol when cells go through apoptosis, and it moderates the caspase inhibition of IAPs. Smac/DIABLO expression is associated with the result of renal cell carcinoma. Dimeric form of Smac/DIABLO implies that once expressed in the cell the protein has a little probability of dissociation and, thus, loss of function. Survivin, Smac/DIABLO, & PKC- play an important part in the inhibition of apoptosis by FGF-2 in human small cell lung cancer cells. Mitochondrial survivin associates with Smac/DIABLO, delaying its release. Decreased expression of Smac protein takes part in ovarian carcinogenesis and chemotherapeutic resistance. Smac/DIABLO plays a role in tumor cells during the pathway of apoptosis induction. SMAC protein is regulated by XIAP and degraded by proteasome. SMAC protein takes part in leukemic cell apoptosis. Smac is released during stress-induced apoptosis in multiple myeloma cells.

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