Data Sheet (Cat.No.TMAY-00652)

Anti-SMAC Antibody (1X374)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	1X374
Purification:	Protein A

Applications

Verified Activity:	1. Anti-Diablo rabbit monoclonal antibody at 1:10000 dilution. -Lane A: Hela Whole Cell Lysate. -Lane B: Jurkat Whole Cell Lysate. -Lane C: A431 Whole Cell Lysate. -Lane D: MCF7 Whole Cell lysate. -Lysates/proteins at 30 µg per lane. -Secondary -Goat Anti-Rabbit IgG H&L (Dylight800) at 1/10000 dilution. -Developed using the Odyssey technique. -Performed under reducing conditions. -Predicted band size:22 kDa. -Observed band size:20 kDa. 2. Immunofluorescence staining of Human Diablo in Hela cells. Cells were fixed with 4% PFA, permeabilzed with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with rabbit anti-Human Diablo monoclonal antibody (1:60) at 4°C overnight. Then cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to cytoplasm. 3. Flow cytometric analysis of Human Diablo expression on HeLa cells. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), stained with purified anti-Human Diablo (Filled hisgram), then a FITC-conjugated second step antibody. To demonstrate specificity of staining, the binding by Anti-SMAC Antibody was blocked by preincubation of the purified antibody with 20ug recombinant human Diablo for 1 hour (Black solid line hisgram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.
Application:	ELISA,FCM,ICC/IF,WB
Recommended	WB: 1:10000-1:50000; ELISA: 1:5000-1:10000; ICC-IF: 1:20-1:100; FCM: 1:25-1:100

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen: Recombinant Protein: Human SMAC / Diablo protein (TMPY-00924)

Antigen Species: Human

Synonyms: SMAC;DFNA64;diablo, IAP-binding mitochondrial protein

Research Background

Apoptosis is an essential processes required for normal development and homeostasis of all metazoan organisms. Second Mitochondria-Derived Activator of Caspases (Smac) or Direct IAP Binding Protein with low isoelectric point, pI (Diablo) is a proapoptogenic mitochondrial protein that is released to the cytosol in response to diverse apoptotic stimuli, including commonly used chemotherapeutic drugs. The current knowlege about structure and function of Smac/Diablo during programmed cell death, both in mitochondrial and receptor pathways are presented. It has been shown that Diablo mainly interacts with IAPs in the cytochrome c/Apaf-1/caspase-9 pathway, and promotes apoptosis. Diablo is released from the mitochondria into the cytosol occurring downstream of cytochrome c release in response to apoptotic stimuli such as irradiation, DNA damage or cytotoxic drugs. In the cytosol, Smac/Diablo interacts and antagonizes inhibitors of apoptosis proteins (IAPs), thus allowing the activation of caspases and apoptosis. This activity has prompted the synthesis of peptidomimetics that could potentially be used in cancer therapy. The role of Smac/DIABLO in colorectal carcinogenesis is ill defined. Data continues to accumulate to suggest that decreased levels of Smac/DIABLO may be important in chemoradiation-resistance to apoptosis in advanced colon cancer.

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