DB045: Smac/DIABLO (C17)

Background:

Second mitochondrial activator of caspases or Smac/DIABLO can promote apoptosis by relieving the inhibition of caspases by the IAPs (1&2). The other mitochondrial activator of apoptosis is cytochrome c (1). Smac/DIABLO export from the mitochondria into the cytosol can be triggered by cytotoxic drugs, DNA damage, and the ligation of FAS (CD95) death receptor (3). Once in the cytosol Smac/DIABLO eliminates the inhibitory effects of the IAPs through and amino terminal interaction with the IAP proteins, and thus allow the activation of caspases (2&4). The interaction of Smac/DIABLO's amino terminus with the IAP proteins has been localized to their BIR domains, for XIAP the key domain is BIR3 (4&5).

Origin:

Smac/DIABLO (C17) is provided as an affinity purified rabbit polyclonal antibody, raised against a peptide mapping to the carboxy terminus of human Smac/DIABLO.

Product Details:

Each vial contains 200 µg/ml of affinity purified rabbit IgG Smac/DIABLO (C17) DB045, in 1 ml PBS containing 0.1 % sodium azide and 0.2% gelatin.

Competition Studies:

A blocking peptide is also available, *DB045P*, for use in competition studies. Each vial contains 100 µg of peptide in 0.5 ml PBS with 0.1% sodium azide and 100 µg BSA.

Specificity:

Smac/DIABLO (C17) DB045 reacts with Smac/DIABLO of human origin by western blotting. Western blotting starting dilution 1:200.
IP and IHC not yet tested

Storage:

Store this product at 4º C, do not freeze. The product is stable for one year from the date of shipment.

References:

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2. Springs S.L., Diavolitsis V.M., Goodhouse J., Mclendon G.L. 2002. The kinetics of translocation of Smac/DIABLO from the mitochondria to the cytosol in HeLa cells. J Biol Chem
3. Adrain C., Creagh E.M., Martin S.J. 2001. Apoptosis-associated release of Smac/DIABLO from mitochondria requires active caspases and is blocked by Bcl-2. EMBO J 20(23):6627-6636.
4. Wu G., Chai J., Suber T.L., Wu J.W., Du C., Wang X., Shi Y. 2000. Structural basis of IAP recognition by Smac/DIABLO. Nature 408(6815):1008-1012.
5. Liu Z., Sun C., Olejniczak E.T., Meadows R.P., Betz S.F., Oost T., Herrmann J., Wu J.C., Fesik S.W. 2000. Structural basis for binding of Smac/DIABLO to the XIAP BIR3 domain. Nature 408(6815):1004-1008.

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