

Store at
-20°C
#42977

Bax (D2E11) Rabbit mAb (BSA and Azide Free)



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H	Endogenous	20	Rabbit IgG	#Q07812	581

Product Usage Information

This product is the carrier free version of product #5023. All data were generated using the same antibody clone in the standard formulation which contains BSA and glycerol.

This formulation is ideal for use with technologies requiring specialized or custom antibody labeling, including fluorophores, metals, lanthanides, and oligonucleotides. It is not recommended for ChIP, ChIP-seq, CUT&RUN or CUT&Tag assays. If you require a carrier free formulation for chromatin profiling, please contact us. Optimal dilutions/concentrations should be determined by the end user.

BSA and Azide Free antibodies are quality control tested by size exclusion chromatography (SEC) to determine antibody integrity.

Formulation

Supplied in 1X PBS (10 mM Na₂HPO₄, 3 mM KCl, 2 mM KH₂PO₄, and 140 mM NaCl (pH 7.8)). BSA and Azide Free.

For standard formulation of this product see product #5023

Storage

Store at -20°C. *This product will freeze at -20°C so it is recommended to aliquot into single-use vials to avoid multiple freeze/thaw cycles.* A slight precipitate may be present and can be dissolved by gently vortexing. This will not interfere with antibody performance.

Specificity/Sensitivity

Bax (D2E11) Rabbit mAb (BSA and Azide Free) detects endogenous levels of total Bax protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu45 of human Bax protein.

Background

The Bcl-2 family consists of a number of evolutionarily conserved proteins containing Bcl-2 homology domains (BH) that regulate apoptosis through control of mitochondrial membrane permeability and release of cytochrome c (1-3). Four BH domains have been identified (BH1-4) that mediate protein interactions. The family can be separated into three groups based upon function and sequence homology: pro-survival members include Bcl-2, Bcl-xL, Mcl-1, A1 and Bcl-w; pro-apoptotic proteins include Bax, Bak and Bok; and "BH3 only" proteins Bad, Bik, Bid, Puma, Bim, Bmf, Noxa and Hrk. Interactions between death-promoting and death-suppressing Bcl-2 family members has led to a rheostat model in which the ratio of pro-apoptotic and anti-apoptotic proteins controls cell fate (4). Thus, pro-survival members exert their behavior by binding to and antagonizing death-promoting members. In general, the "BH3-only members" can bind to and antagonize the pro-survival proteins leading to increased apoptosis (5). While some redundancy of this system likely exists, tissue specificity, transcriptional and post-translational regulation of many of these family members can account for distinct physiological roles.

Bax is a key component for cellular induced apoptosis through mitochondrial stress (6). Upon apoptotic stimulation, Bax forms oligomers and translocates from the cytosol to the mitochondrial membrane (7). Through interactions with pore proteins on the mitochondrial membrane, Bax increases the membrane's permeability, which leads to the release of cytochrome c from mitochondria, activation of caspase-9 and initiation of the caspase activation pathway for apoptosis (8,9).

Background References

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2. Antonsson, B. and Martinou, J.C. (2000) *Exp Cell Res* 256, 50-7.
3. Sharpe, J.C. et al. (2004) *Biochim Biophys Acta* 1644, 107-13.
4. Korsmeyer, S.J. et al. (1993) *Semin Cancer Biol* 4, 327-32.
5. Bouillet, P. and Strasser, A. (2002) *J Cell Sci* 115, 1567-74.
6. Wei, M.C. et al. (2001) *Science* 292, 727-30.
7. Jürgensmeier, J.M. et al. (1998) *Proc Natl Acad Sci USA* 95, 4997-5002.
8. Narita, M. et al. (1998) *Proc Natl Acad Sci USA* 95, 14681-6.
9. Marzo, I. et al. (1998) *Science* 281, 2027-31.
10. Brimmell, M. et al. (1998) *Oncogene* 16, 1803-12.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human

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