

#5023 Store at -20°C

## Bax (D2E11) Rabbit mAb



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

### Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:50 - 1:200

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #42977.

### Specificity / Sensitivity

Bax (D2E11) Rabbit mAb 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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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).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**WB:** Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation  
**IHC-P:** Immunohistochemistry (Paraffin)

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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