



MONOCLONAL ANTIBODY

For research use only. Not for clinical diagnosis.

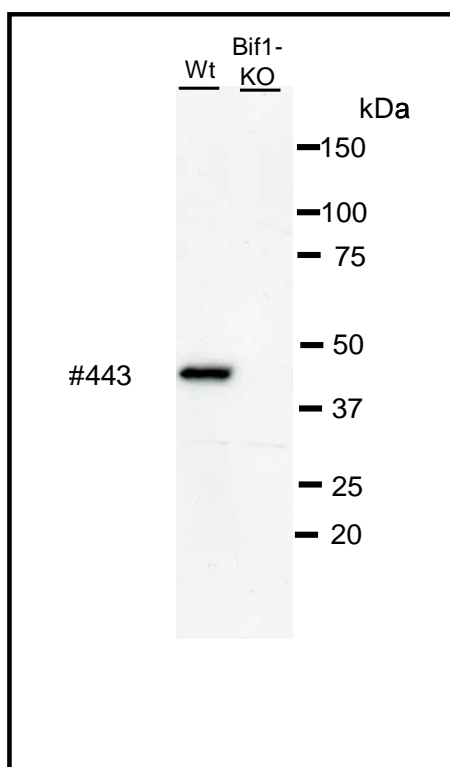
Catalog No. CTB-BF-M01-W

Anti BIF1 (Clone: BIF1·443)

BACKGROUND

Bif1 (Bax interacting factor 1; also known as SH3GLB1) was initially cloned as a binding partner of the pro-apoptotic Bax protein. This protein is a member of the endophilin B protein family and contains an amino-terminal N-BAR domain and a carboxy-terminal Src homology 3 (SH3) domain^{1, 2)}. Bif1 gene encodes a predicted protein of 365 amino acid and mouse and human Bif-1 protein are highly conserved and share 96% identity at the amino acids level. RNA expression of Bif-1 in human tissue is abundant in heart, skeletal muscle, kidney, and placenta¹⁾. Bif-1 protein plays a critical role in apoptosis, mitochondrial morphology and autophagy^{1),3),4)}. Loss of Bif-1 suppresses programmed cell death and promotes tumorigenesis⁵⁾.

Product type	Primary antibodies
Host	Mouse
Form	Liquid Protein G purified PBS (pH7.4) with 1% BSA and less than 0.1% NaN ₃ as a preservative.
Volume	500 μ l
Concentration	0.1mg/ml
Genebank Info	NP_057093.1(Homo sapiens), NP_062337.1(Mus musculus)
Other Names	SH3-domain GRB2-like endophilin B1, SH3GLB1, CGI-61, KIAA0491, dJ612B15.2, endophilin B1, Bax-interacting factor 1
Antigen	Human Recombinant BIF1
Clone	BIF1·443
Cross reactivity	Human, Mouse
Isotype	IgG2a
Application notes	<u>Western blot</u> Wild type (left lane) or Bif-1 deficient (right lane) mouse embryonic fibroblast with anti Bif-1 antibody (clone #443) at 1:500 dilution blocked with 3% skim milk in TBS-T. Predicted band size is around 42 kDa (calculated weight is 40.8 kDa according to NP_062337.1).



Storage

Store below -20°C (below -70°C for prolonged storage).

Aliquot to avoid cycles of freeze/thaw.

References

- 1) Cuddeback SM, Yamaguchi H, Komatsu K, Miyashita T, Yamada M, Wu C, Singh S, Wang HG: Molecular cloning and characterization of Bif-1. A novel Src homology 3 domain-containing protein that associates with Bax. *J Biol Chem.* 2001; 276(23):20559-65.
- 2) Pierrat B, Simonen M, Cueto M, Mestan J, Ferrigno P, Heim J: SH3GLB, a new endophilin-related protein family featuring an SH3 domain. *Genomics.* 2001; 71(2): 222-34.
- 3) Karbowski M, Jeong SY, Youle RJ. Endophilin B1 is required for the maintenance of mitochondrial morphology. *J Cell Biol.* 2004;166: 1027-39.
- 4) Takahashi Y, Meyerkord CL, Wang HG: Bif-1/endophilin B1: a candidate for crescent driving force in autophagy. *Cell Death Differ.* 2009; 16(7): 947-55. [Review]
- 5) Takahashi Y, Coppola D, Matsushita N, Cualing HD, Sun M, Sato Y, Liang C, Jung JU, Cheng JQ, Mulé JJ, Pledger WJ, Wang HG: Bif-1 interacts with Beclin 1 through UVRAG and regulates autophagy and tumorigenesis. *Nat Cell Biol.* 2007; 9(10): 1142-51.

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