

Bif-1 Antibody

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	42	Rabbit	#Q9Y371	51100

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

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

Specificity/Sensitivity

Bif-1 Antibody recognizes endogenous levels of total Bif-1 protein.

Species predicted to react based on 100% sequence homology

Monkey, Bovine, Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly129 of human Bif-1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Bif-1/SH3GLB1/Endophilin-B1 is a member of the endophilin B family that was originally identified as a Bax binding protein through yeast two-hybrid screening (1,2). Bif-1 does not have significant homology to other Bcl-2 family members, but rather contains an N-terminal Bin-Amphiphysin-Rvs (BAR) domain, typically involved in membrane dynamics, and a C-terminal SH3 domain. Overexpression of Bif-1 promotes Bax conformational change and apoptosis (2,3). Likewise, loss of Bif-1 inhibits Bax and Bak activation, cytochrome c release, and caspase activation (3). Bif-1 is localized to membranes of intracellular organelles and has been suggested to play a role in membrane dynamics, including that during autophagy. Bif-1 directly binds to UVRAG, forming a complex with Beclin-1, resulting in increased PI3-kinase class III/Vps34 activity required for autophagosome maturation (4). Inhibition of GSK-3β, as seen during nutrient deprivation, results in increased expression of Bif-1, and can contribute to autophagic cell death (5). Research studies have shown that loss of Bif-1 promotes tumorigenesis, and decreased expression of Bif-1 has been noted in several cancer types (4,6-10).

Background References

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- Cuddeback, S.M. et al. (2001) *J Biol Chem* 276, 20559-65.
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- Yang, J. et al. (2010) *J Cell Sci* 123, 861-70.
- Coppola, D. et al. (2011) *Pancreas* 40, 433-7.
- Coppola, D. et al. (2008) *Cancer* 113, 2665-70.
- Coppola, D. et al. (2008) *Clin Genitourin Cancer* 6, 117-21.
- Kim, S.Y. et al. (2008) *Pathology* 40, 553-7.
- Lee, J.W. et al. (2006) *Pathology* 38, 312-5.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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