

Bag1 (3.10G3E2) Mouse mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	52, 46, 33	Mouse IgG1	#Q99933	573

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

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.

Specificity/Sensitivity

Bag1 (3.10G3E2) Mouse mAb detects endogenous levels of total Bag1 protein, including long, medium and short isoforms.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant full length human Bag1.

Background

Bag1 belongs to the Bcl-2 associated athanogene (BAG) family of multifunctional proteins and was the first of six related proteins isolated from humans (1,2). This widely expressed protein interacts with a number of signaling molecules (including Bcl2, HGF receptor and Raf1) as it regulates signaling molecules in pathways involving cell survival, growth and differentiation. The most common role played by Bag1 protein is as an inhibitor of proteins favoring apoptosis (2-4). Bag1 also plays a role in Raf1 signaling and binds DNA as a transcription activator (4). Bag1 protein is a well-characterized inhibitor of its binding partner HSP70 (5). A conserved carboxy-terminal BAG domain within Bag1 interacts with the ATPase domain of HSP70 to negatively regulate heat shock protein chaperone activity (6,7). The multiple isoforms of Bag1 protein generated from a single transcript share a common ubiquitin homology domain and a carboxy-terminal Hsp70 binding region but differ in length and cellular localization. The 50 kDa long (Bag1-L) isoform also contains a nuclear localization signal and is often found in the nucleus where it activates transcription. The 46 kDa intermediate (Bag1-M) isoform is found mainly in the cytoplasm but can also translocate to the nucleus when associated with other proteins. The shorter 29-33 kDa isoforms (Bag1-S, Bag1-I) isoforms are found primarily in the cytoplasm (8). High expression of the anti-apoptotic Bag1 protein correlates with increased survival in patients with particular forms of cancer, leading researchers to study possible therapeutic roles for Bag1 protein (9).

Background References

1. Kudoh, M. et al. (2002) *Cancer Res* 62, 1904-9.
2. Takayama, S. et al. (1995) *Cell* 80, 279-84.
3. Bardelli, A. et al. (1996) *EMBO J* 15, 6205-12.
4. Wang, H.G. et al. (1996) *Proc Natl Acad Sci USA* 93, 7063-8.
5. Takayama, S. et al. (1997) *EMBO J* 16, 4887-96.
6. Bimston, D. et al. (1998) *EMBO J* 17, 6871-8.
7. Briknarová, K. et al. (2001) *Nat Struct Biol* 8, 349-52.
8. Knee, D.A. et al. (2001) *J Biol Chem* 276, 12718-24.
9. Millar, E.K. et al. (2009) *Br J Cancer* 100, 123-33.

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

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