Revision 1

Store at -20C

#8523

BAG6 Antibody

Cell Signaling TECHNOLOGY®

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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	H M R Mk Pg	Endogenous	150	Rabbit	#P46379	7917

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

BAG6 Antibody recognizes endogenous levels of total BAG6 protein. It does not cross-react with other BCL2-associated athanogene (Bag) family members.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human BAG6 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

BAG6 (BCL2-associated athanogene-6), alternately known as BAT3 (HLA-B-associated transcript 3), was originally identified as a gene within the class III region of the human major histocompatibility complex, but has subsequently been found to exhibit protein chaperone activity. BAG6, in conjunction with other chaperone proteins and ubiquitin ligases, regulates protein stability and insertion of tail-anchored membrane proteins into the endoplasmic reticulum (ER) (1-3). The BAT3 complex, consisting of BAG6, TRC35, and Ubl4a localizes to ribosomes synthesizing membrane proteins and facilitates tailed-anchored protein capture by TRC40 and subsequent insertion of the nascent protein in to the ER membrane (4,5). BAG6 also plays a critical role in clearing cells of mis-folded and mis-localized peptides via ER-associated degradation and the ubiquitin-proteasome system (1,6,7). BAG6 may also act as a chaperone for glycoproteins through its interaction with DERLIN2 (8).

In addition to its role as a chaperone, BAG6 has also been implicated in regulating chromatin structure and gene expression. For example, BAG6 and SET1A act as binding partners for BORIS to effect changes of chromatin structure and gene expression (9). Similarly, increased expression of BAG6 induces p300-mediated acetylation of p53, which is required for DNA damage response (10). BAG6 has also been found to interact with TGF-β, and in so doing acts as a positive regulator of TGF-β1 stimulation of type 1 collagen expression (11). BAG6 also suppresses bone morphogenic protein (BMP) signaling via its interaction with and regulation of small C-terminal domain phosphatase (SCP) that dephosphorylates SMAD proteins, resulting in subsequent termination of BMP-mediated events (12).

Background References

1. Hessa, T. et al. (2011) *Nature* 475, 394-7.
2. David, R. (2011) *Nat Rev Mol Cell Biol* 12, 550.
3. Ast, T. and Schuldiner, M. (2011) *Curr Biol* 21, R692-5.
4. Mariappan, M. et al. (2010) *Nature* 466, 1120-4.
5. Leznicki, P. et al. (2010) *J Cell Sci* 123, 2170-8.
6. Minami, R. et al. (2010) *J Cell Biol* 190, 637-50.
7. Wang, Q. et al. (2011) *Mol Cell* 42, 758-70.
8. Claessen, J.H. and Ploegh, H.L. (2011) *PLoS One* 6, e28542.
9. Nguyen, P. et al. (2008) *Mol Cell Biol* 28, 6720-9.
10. Sasaki, T. et al. (2007) *Genes Dev* 21, 848-61.
11. Kwak, J.H. et al. (2008) *J Biol Chem* 283, 19816-25.
12. Goto, K. et al. (2011) *Cell Death Dis* 2, e236.

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

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey **Pg:** Pig

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