

BAG6 / G3 / Scythe Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS15474**Specification**

BAG6 / G3 / Scythe Antibody (C-Terminus) - Product Information

Application	IHC
Primary Accession	P46379
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	119kDa KDa

BAG6 / G3 / Scythe Antibody (C-Terminus) - Additional Information**Gene ID** 7917**Other Names**

Large proline-rich protein BAG6, BAG family molecular chaperone regulator 6, BCL2-associated athanogene 6, BAG-6, BAG6, HLA-B-associated transcript 3, Protein G3, Protein Scythe, BAG6, BAT3, G3

Target/Specificity

The antibody detects endogenous Scythe/BAT3 in cell lysates.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions

BAG6 / G3 / Scythe Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

BAG6 / G3 / Scythe Antibody (C-Terminus) - Protein Information**Name** BAG6 ([HGNC:13919](#))**Function**

ATP-independent molecular chaperone preventing the aggregation of misfolded and hydrophobic patches-containing proteins (PubMed:21636303). Functions as part of a cytosolic protein quality control complex, the BAG6/BAT3 complex, which maintains these client proteins in a soluble state and participates in their proper delivery to the endoplasmic reticulum or alternatively can promote their sorting to the proteasome where they undergo degradation (PubMed:20516149, PubMed:21636303, PubMed:21743475, PubMed:28104892). The BAG6/BAT3 complex is involved in the post-translational delivery of tail- anchored/type II

transmembrane proteins to the endoplasmic reticulum membrane. Recruited to ribosomes, it interacts with the transmembrane region of newly synthesized tail-anchored proteins and together with SGTA and ASNA1 mediates their delivery to the endoplasmic reticulum (PubMed:20516149, PubMed:20676083, PubMed:28104892, PubMed:25535373). Client proteins that cannot be properly delivered to the endoplasmic reticulum are ubiquitinated by RNF126, an E3 ubiquitin-protein ligase associated with BAG6 and are sorted to the proteasome (PubMed:24981174, PubMed:28104892, PubMed:27193484). SGTA which prevents the recruitment of RNF126 to BAG6 may negatively regulate the ubiquitination and the proteasomal degradation of client proteins (PubMed:23129660, PubMed:25179605, PubMed:27193484). Similarly, the BAG6/BAT3 complex also functions as a sorting platform for proteins of the secretory pathway that are mislocalized to the cytosol either delivering them to the proteasome for degradation or to the endoplasmic reticulum (PubMed:21743475). The BAG6/BAT3 complex also plays a role in the endoplasmic reticulum-associated degradation (ERAD), a quality control mechanism that eliminates unwanted proteins of the endoplasmic reticulum through their retrotranslocation to the cytosol and their targeting to the proteasome. It maintains these retrotranslocated proteins in an unfolded yet soluble state condition in the cytosol to ensure their proper delivery to the proteasome (PubMed:21636303). BAG6 is also required for selective ubiquitin-mediated degradation of defective nascent chain polypeptides by the proteasome. In this context, it may participate in the production of antigenic peptides and play a role in antigen presentation in immune response (By similarity). BAG6 is also involved in endoplasmic reticulum stress-induced pre-emptive quality control, a mechanism that selectively attenuates the translocation of newly synthesized proteins into the endoplasmic reticulum and reroutes them to the cytosol for proteasomal degradation. BAG6 may ensure the proper degradation of these proteins and thereby protects the endoplasmic reticulum from protein overload upon stress (PubMed:26565908). By inhibiting the polyubiquitination and subsequent proteasomal degradation of HSPA2 it may also play a role in the assembly of the synaptonemal complex during spermatogenesis (By similarity). Also positively regulates apoptosis by interacting with and stabilizing the proapoptotic factor AIFM1 (By similarity). By controlling the steady-state expression of the IGF1R receptor, indirectly regulates the insulin-like growth factor receptor signaling pathway (PubMed:26692333).

Cellular Location

Cytoplasm, cytosol. Nucleus. Secreted, extracellular exosome Note=Normally localized in cytosol and nucleus, it can also be released extracellularly, in exosomes, by tumor and myeloid dendritic cells (PubMed:18055229, PubMed:18852879). Cytoplasmic retention is due to interaction with GET4 (PubMed:29042515).

Tissue Location

Expressed by immature dendritic cells (at protein level).

Volume

250 µl

BAG6 / G3 / Scythe Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BAG6 / G3 / Scythe Antibody (C-Terminus) - Images



Anti-BAG6 / G3 / Scythe antibody IHC of human testis.

BAG6 / G3 / Scythe Antibody (C-Terminus) - Background

Chaperone that plays a key role in various processes such as apoptosis, insertion of tail-anchored (TA) membrane proteins to the endoplasmic reticulum membrane and regulation of chromatin. Key component of the BAG6/BAT3 complex, a cytosolic multiprotein complex involved in the post-translational delivery of tail-anchored (TA) membrane proteins to the endoplasmic reticulum membrane. TA membrane proteins, also named type II transmembrane proteins, contain a single C-terminal transmembrane region. BAG6/BAT3 acts by facilitating TA membrane proteins capture by ASNA1/TRC40: it is recruited to ribosomes synthesizing membrane proteins, interacts with the transmembrane region of newly released TA proteins and transfers them to ASNA1/TRC40 for targeting to the endoplasmic reticulum membrane. Moreover, it regulates the stability and the degradation of proteins by the proteasome. For instance, it is required for selective ubiquitin-mediated degradation of defective nascent chain polypeptides by the proteasome. In this context, may play a role in immuno- proteasomes to generate antigenic peptides via targeted degradation, thereby playing a role in antigen presentation in immune response. It is also involved in ubiquitin-mediated proteasomal degradation of proteins of the secretory pathway that are mislocalized to the cytosol. Binds the mislocalized proteins, preventing their aggregation in the cytosol, and promotes their ubiquitination. Participates in endoplasmic reticulum stress- induced apoptosis via its interaction with AIFM1/AIF by regulating AIFM1/AIF stability and preventing its degradation. Also required during spermatogenesis for synaptonemal complex assembly via its interaction with HSPA2, by inhibiting polyubiquitination and subsequent proteasomal degradation of HSPA2.

BAG6 / G3 / Scythe Antibody (C-Terminus) - References

Banerji J., et al. Proc. Natl. Acad. Sci. U.S.A. 87:2374-2378(1990).
Bechtel S., et al. BMC Genomics 8:399-399(2007).

Ota T.,et al.Nat. Genet. 36:40-45(2004).

Xie T.,et al.Genome Res. 13:2621-2636(2003).

Hirakawa M.,et al.Submitted (DEC-2004) to the EMBL/GenBank/DDBJ databases.