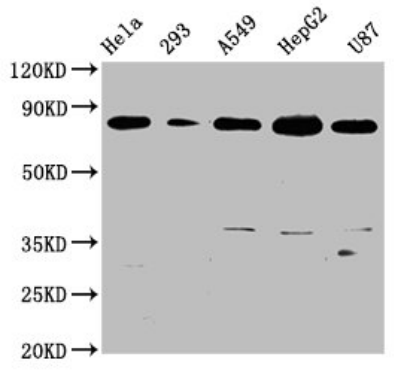
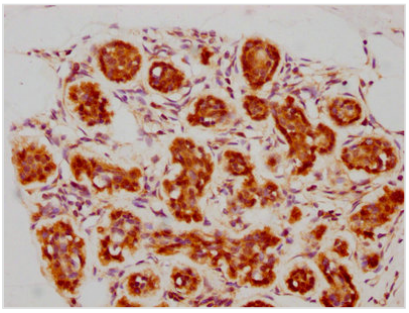
BAG3 Recombinant Monoclonal Antibody

Product Code	CSB-RA002531A0HU
Abbreviation	BAG family molecular chaperone regulator 3
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O95817
Immunogen	A synthesized peptide derived from human BAG3
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	Co-chaperone for HSP70 and HSC70 chaperone proteins. Acts as a nucleotide-exchange factor (NEF) promoting the release of ADP from the HSP70 and HSC70 proteins thereby triggering client/substrate protein release. Nucleotide release is mediated via its binding to the nucleotide-binding domain (NBD) of HSPA8/HSC70 where as the substrate release is mediated via its binding to the substrate-binding domain (SBD) of HSPA8/HSC70 (PubMed:9873016, PubMed:27474739). Has anti-apoptotic activity (PubMed:10597216). Plays a role in the HSF1 nucleocytoplasmic transport (PubMed:26159920).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	BAG family molecular chaperone regulator 3, BAG-3, Bcl-2-associated athanogene 3, Bcl-2-binding protein Bis, Docking protein CAIR-1, BAG3, BIS
Immunogen Species	Homo sapiens (Human)
Research Area	Cell Biology
Gene Names	BAG3
Clone No.	3D8
Image	



Western Blot
Positive WB detected in: Hela whole cell lysate, 293 whole cell lysate, A549 whole cell lysate, HepG2 whole cell lysate, U87 whole cell lysate
All lanes: BAG3 antibody at 0.73μg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 62 KDa
Observed band size: 80 KDa



IHC image of CSB-RA002531A0HU diluted at 1:73.75 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.

Description

The production of the BAG3 recombinant monoclonal antibody uses DNA recombinant technology and in vitro genetic manipulation. It starts with immunizing an animal using a synthesized peptide derived from human BAG3, followed by the isolation and selection of positive B cells. The selected B cells undergo screening and single clone identification. The genes encoding the light and heavy chains of the BAG3 antibody are then amplified using PCR and inserted into a plasmid vector. This recombinant vector is subsequently transfected into a host cell line to enable antibody expression. The BAG3 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography. It demonstrates specificity towards human BAG3 protein and is well-suited for ELISA, WB, and IHC applications.

BAG3 plays a critical role in maintaining cellular homeostasis by regulating protein quality control, apoptosis, and autophagy. BAG3 functions as a co-chaperone for Hsp70, regulating its ATPase activity and assisting in the refolding of misfolded proteins. BAG3 also targets misfolded proteins for degradation by autophagy through its interaction with HspB8, which promotes the formation of autophagosomes. Dysfunction of BAG3 has been associated with various human diseases, including cancer, neurodegeneration, and myopathies.