GRP78 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	GRP78, Monoclonal Antibody
Full Product Name	GRP78 Monoclonal Antibody
Product Gene Name	anti-GRP78 antibody
Product Synonym Names	Anti-Grp78
Clonality	Monoclonal
Isotype	IgG2b
Host	Mouse
Specificity	This antibody recognizes human GRP78.
Preparation and Storage	This antibody is stable for at least one (1) year at -20 degree C. Avoid multiple freeze-thaw cycles.
Molecular Weight	72,333 Da
OMIM	138120
Antigen	His-tagged human GRP78 (accession no. NP_001156906.1)
Positive Control	HeLa cell lysate.
Dilution Instructions	Dilute in PBS or medium which is identical to that used in the assay system.
Product Categories/Family for anti-GRP78 antibody	Heat Shock and Stress Protein Antibodies
Applications Tested/Suitable for anti-GRP78 antibody	ELISA (EIA), Immunoblot (IB)
Application Notes for anti-GRP78 antibody	Immunoblotting: Use at 0.5-1.0ug/ml. A band of ~78kDa is detected.
Related Product Information for anti-GRP78 antibody	GRP78 is a ubiquitously expressed, 78kDa glucose-regulated protein commonly referred to as an immunoglobulin chain binding protein (BiP). Categorized as stress response proteins, BiPs play an important role in folding and assembly of nascent proteins and in scavenging of misfolded proteins in the endoplasmic reticulum lumen. Translation of BiP is directed by an internal ribosomal entry site (IRES) in the 5- nontranslated region of BiP mRNA. BiP IRES activity increases when cells are heat-stressed. GRP78 is also important in maintenance of cell omeostasis and the prevention of apoptosis. Levels of GRP78 protein are reduced in brains of Alzheimers disease patients.
Other Notes	Small volumes of anti-GRP78 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for GRP78 purchase	MBS190635 is an antibody targeting GRP78. Also known as GRP78 Monoclonal Antibody. Host: Mouse.



Testing Data of anti-GRP78 antibody

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GRP78. It may not necessarily be applicable to this product.

NCBI GI #	386758
NCBI GeneID	3309
NCBI Accession #	AAA52614.1
UniProt Secondary Accession #	Q2EF78; Q9NPF1; Q9UK02; B0QZ61
UniProt Related Accession #	P11021
NCBI Official Full Name	GRP78, partial
NCBI Official Synonym Full Names	heat shock protein family A (Hsp70) member 5
NCBI Official Symbol	HSPA5
NCBI Official Synonym Symbols	BIP; MIF2; GRP78; HEL-S-89n
UniProt Protein Name	78 kDa glucose-regulated protein
UniProt Synonym Protein Names	Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78; Heat shock 70 kDa protein 5; Immunoglobulin heavy chain-binding protein; BiP
Protein Family	78 kDa glucose-regulated protein
UniProt Gene Name	HSPA5
UniProt Synonym Gene Names	GRP78; GRP-78; BiP
UniProt Entry Name	GRP78_HUMAN
NCBI Protein Information	78 kDa glucose-regulated protein
NCBI Summary for GRP78	The protein encoded by this gene is a member of the heat shock protein 70 (HSP70) family. It is localized in the lumen of the endoplasmic reticulum (ER), and is involved in the folding and assembly of proteins in the ER. As this protein interacts with many ER proteins, it may play a key role in monitoring protein transport through the cell.[provided by RefSeq, Sep 2010]

UniProt Comments for GRP78	GRP78: a member of the HSP family of molecular chaperones required for endoplasmic reticulum integrity and stress-induced autophagy. Plays a central role in regulating the unfolded protein response (UPR), and is an obligatory component of autophagy in mammalian cells. May play an important role in cellular adaptation and oncogenic survival. One of the client proteins of GRP78 is protein double-stranded RNA-activated protein-like endoplasmic reticulum kinase (PERK). Probably plays a role in facilitating the assembly of multimeric protein complexes inside the ER. Protein type: Chaperone; Heat shock protein Chromosomal Location of Human Ortholog: 9q33.3 Cellular Component: cell surface; endoplasmic reticulum; endoplasmic reticulum lumen; endoplasmic reticulum membrane; ER-Golgi intermediate compartment; focal adhesion; integral to endoplasmic reticulum membrane; melanosome; membrane; midbody; mitochondrion; myelin sheath; nucleus; plasma membrane; signalosome; smooth endoplasmic reticulum Molecular Function: ATP binding; ATPase activity; calcium ion binding; chaperone binding; enzyme binding; glycoprotein binding; misfolded protein binding; protein binding; protein domain specific binding; ribosome binding; ubiquitin protein ligase binding; unfolded protein binding Biological Process: cellular response to glucose starvation; cerebellar Purkinje cell layer development; cerebellum structural organization; ER overload response; ER-associated protein catabolic process; negative regulation of apoptosis; negative regulation of transforming growth factor beta receptor signaling pathway; positive regulation of cell migration; positive regulation of protein ubiquitination; substantia nigra development; unfolded protein response; unfolded protein response, activation of signaling protein activity
Research Articles on GRP78	**1.** stabilization of WASF3 function occurs through its interaction with ATAD3A and GRP78, which may provide a bridge between the ER and mitochondria, allowing communication between the two organelles
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