

Product Name: GRP78 BiP (11J12) Rabbit Monoclonal Antibody
Catalog #: AMRe11793



Summary

Production Name	GRP78 BiP (11J12) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB,IHC-P,FC,IF-P
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type
Buffer	preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
Purification	Affinity purification

Immunogen

Gene Name	HSPA5
Alternative Names	GRP-78; GRP78; BIP; MIF2; HSPA5
Gene ID	3309.0
SwissProt ID	P11021.

Application

Dilution Ratio	WB 1:1000-1:5000, IHC-P/IF-P 1:100-1:500, FCM 1:100-1:200
Molecular Weight	72kDa

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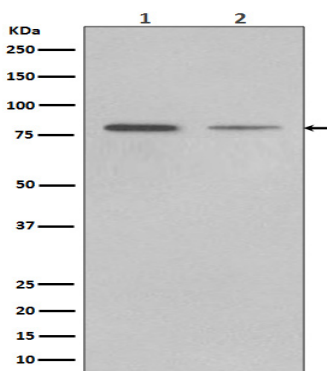


Background

When Chinese hamster K12 cells are starved of glucose, the synthesis of several proteins, called glucose-regulated proteins (GRPs), is markedly increased. Hendershot et al. (1994) (PubMed: [8020977](http://www.ncbi.nlm.nih.gov/pubmed/8020977)) pointed out that one of these, GRP78 (HSPA5), also referred to as 'immunoglobulin heavy chain-binding protein' (BiP), is a member of the heat-shock protein-70 (HSP70) family and is involved in the folding and assembly of proteins in the endoplasmic reticulum (ER). Endoplasmic reticulum chaperone that plays a key role in protein folding and quality control in the endoplasmic reticulum lumen (PubMed: [2294010](http://www.uniprot.org/citations/2294010), PubMed: [23769672](http://www.uniprot.org/citations/23769672), PubMed: [23990668](http://www.uniprot.org/citations/23990668), PubMed: [28332555](http://www.uniprot.org/citations/28332555)). Involved in the correct folding of proteins and degradation of misfolded proteins via its interaction with DNAJC10/ERdj5, probably to facilitate the release of DNAJC10/ERdj5 from its substrate (By similarity). Acts as a key repressor of the ERN1/IRE1-mediated unfolded protein response (UPR) (PubMed: [1550958](http://www.uniprot.org/citations/1550958), PubMed: [19538957](http://www.uniprot.org/citations/19538957)). In the unstressed endoplasmic reticulum, recruited by DNAJB9/ERdj4 to the luminal region of ERN1/IRE1, leading to disrupt the dimerization of ERN1/IRE1, thereby inactivating ERN1/IRE1 (By similarity). Accumulation of misfolded protein in the endoplasmic reticulum causes release of HSPA5/BiP from ERN1/IRE1, allowing homodimerization and subsequent activation of ERN1/IRE1 (By similarity). Plays an auxiliary role in post-translational transport of small presecretory proteins across endoplasmic reticulum (ER). May function as an allosteric modulator for SEC61 channel-forming translocon complex, likely cooperating with SEC62 to enable the productive insertion of these precursors into SEC61 channel. Appears to specifically regulate translocation of precursors having inhibitory residues in their mature region that weaken channel gating. May also play a role in apoptosis and cell proliferation (PubMed: [26045166](http://www.uniprot.org/citations/26045166)).

Research Area

Image Data



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Western blot analysis of GRP78 BiP expression in (1) LnCaP cell lysate;(2) HepG2 cell lysate.

Note

For research use only.