10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-GRP78/BiP Antibody (9E4-2A7-H6)

Mouse Monoclonal Antibody
Catalog # ABV12064

Specification

Anti-GRP78/BiP Antibody (9E4-2A7-H6) - Product Information

Application	**WB, ICC, IHC**
Primary Accession	P11021
Reactivity	**Human, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**

Anti-GRP78/BiP Antibody (9E4-2A7-H6) - Additional Information

Gene ID 3309

Application & Usage	**WB: Hela, C6, Lncap and MDA-MB-468 cell lysates; IF: HeLa cells; IHC: Colorectal cancer tissue**

Other Names
GRP-78, Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78, Heat shock 70 kDa protein 5, Immunoglobulin heavy chain-binding protein, BiP, HSPA5, GRP78

Target/Specificity
GRP78

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
In PBS (pH 7.4) containing with 0.02% sodium azide and 50% glycerol

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Anti-GRP78/BiP Antibody (9E4-2A7-H6) is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-GRP78/BiP Antibody (9E4-2A7-H6) - Protein Information

Name HSPA5 (HGNC:5238)

Function
Endoplasmic reticulum chaperone that plays a key role in protein folding and quality control in the endoplasmic reticulum lumen (PubMed:2294010, PubMed:23769672, PubMed:23990668, PubMed: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 EIF2AK3/PERK and ERN1/IRE1- mediated unfolded protein response (UPR) (PubMed:1550958, PubMed:11907036, PubMed: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). Also binds and inactivates EIF2AK3/PERK in unstressed cells (PubMed:11907036). Accumulation of misfolded protein in the endoplasmic reticulum causes release of HSPA5/BiP from ERN1/IRE1 and EIF2AK3/PERK, allowing their homodimerization and subsequent activation (PubMed:11907036). 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).

Cellular Location
Endoplasmic reticulum lumen. Melanosome. Cytoplasm {ECO:0000250|UniProtKB:P20029}. Cell surface Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:12643545). Localizes to the cell surface of epithelial cells in response to high levels of free iron (PubMed:20484814, PubMed:24355926, PubMed:27159390)

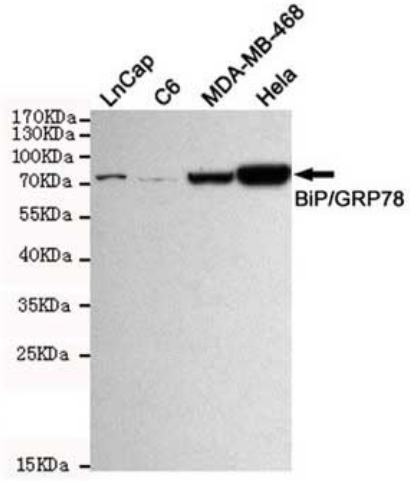
Anti-GRP78/BiP Antibody (9E4-2A7-H6) - Protocols

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

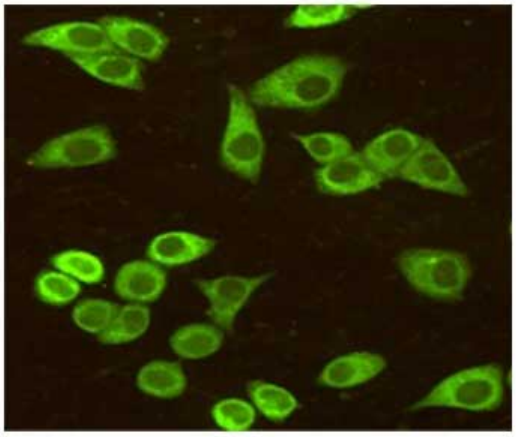
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-GRP78/BiP Antibody (9E4-2A7-H6) - Images

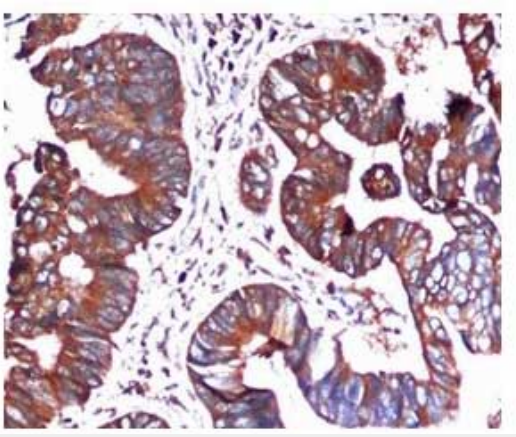
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Western blot detection of BiP/GRP78 (Cterminus) in Heia, C6, Lncap and MOA-MB- 468 cell lysates using BiP/GRP78 (Cterminus) mouse mAb



Immunocytochemistry staining of HeLa cells fixed with 4% Paraformaidehyde and using anti-BiP/GRP78 (C-tcrminus) mouse mAb



Immunohistochemical analysis of paraffinembedded Colorectal cancer using BiP/GRP78 (C-terminus) Mouse mAb

Anti-GRP78/BiP Antibody (9E4-2A7-H6) - Background

Probably plays a role in facilitating the assembly of multimeric protein complexes inside the

endoplasmic reticulum. Involved in the correct folding of proteins and degradation of misfolded proteins via its interaction with DNAJC10, probably to facilitate the release of DNAJC10 from its substrate.