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Anti-GRP78 BiP HSPA5 Rabbit Monoclonal Antibody

Catalog # ABO13957

Specification

Anti-GRP78 BiP HSPA5 Rabbit Monoclonal Antibody - Product Information

Application	**WB, IHC, IF, ICC**
Primary Accession	P11021
Host	**Rabbit**
Isotype	**Rabbit IgG**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Liquid**

Description
Anti-GRP78 BiP HSPA5 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

Anti-GRP78 BiP HSPA5 Rabbit Monoclonal Antibody - Additional Information

Gene ID 3309

Other Names
Endoplasmic reticulum chaperone BiP, 3.6.4.10, 78 kDa glucose-regulated protein, GRP-78, Binding-immunoglobulin protein {ECO:0000303|Ref.4}, BiP {ECO:0000303|Ref.4}, Heat shock protein 70 family protein 5, HSP70 family protein 5, Heat shock protein family A member 5 {ECO:0000312|HGNC:HGNC:5238}, Immunoglobulin heavy chain-binding protein {ECO:0000303|Ref.4}, HSPA5 (HGNC:5238)

Calculated MW
72333 MW KDa

Application Details
WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200

Subcellular Localization
Endoplasmic reticulum lumen. Melanosome. Cytoplasm. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

Contents
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen
A synthesized peptide derived from human GRP78 BiP

Purification
Affinity-chromatography

Storage	**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

Anti-GRP78 BiP HSPA5 Rabbit Monoclonal Antibody - 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 HSPA5 Rabbit Monoclonal Antibody - 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

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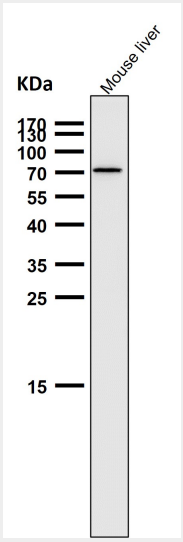
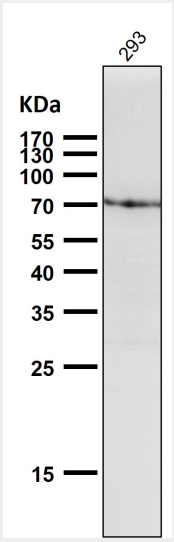
- Cell Culture

Anti-GRP78 BiP HSPA5 Rabbit Monoclonal Antibody - Images



All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.



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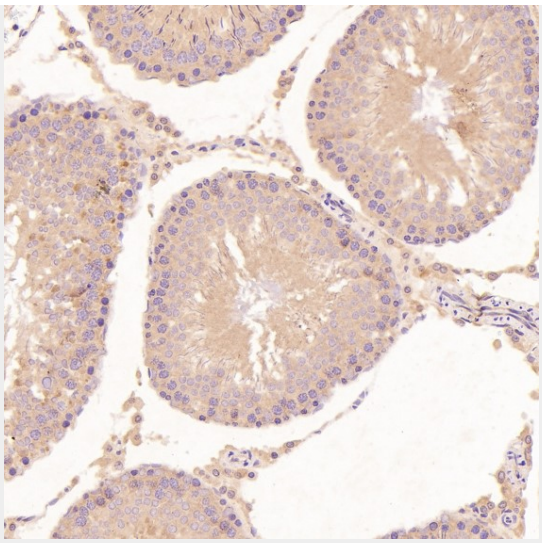
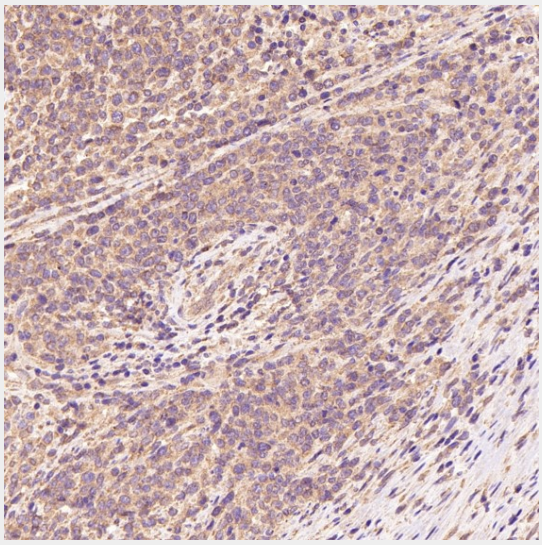
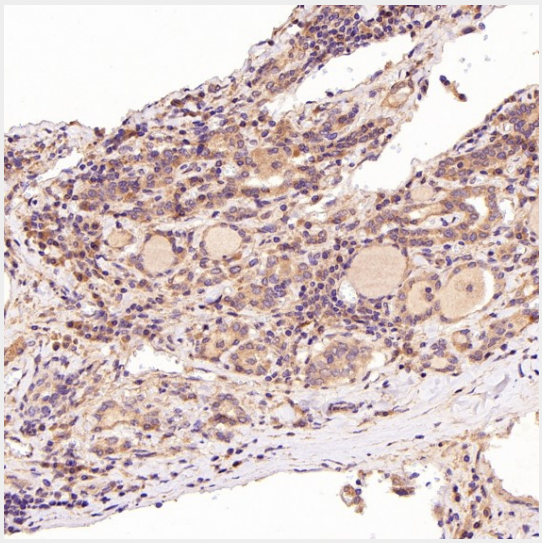


Immunohistochemical analysis of paraffin-embedded Rat testis, using the Antibody at 1:200 dilution.



Immunohistochemical analysis of paraffin-embedded Human non-Hodgkin's lymphoma, using the Antibody at 1:100 dilution.



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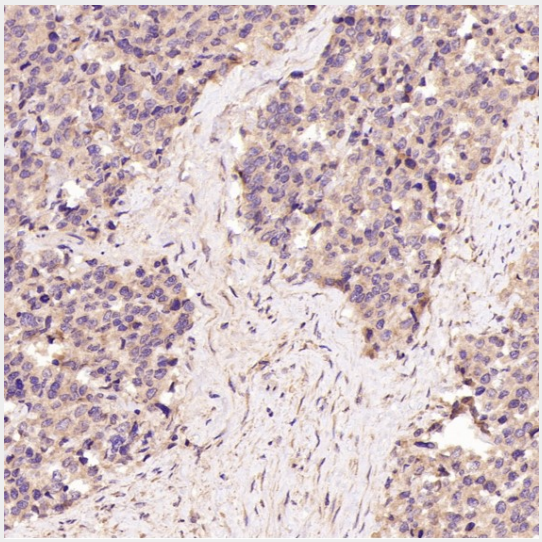
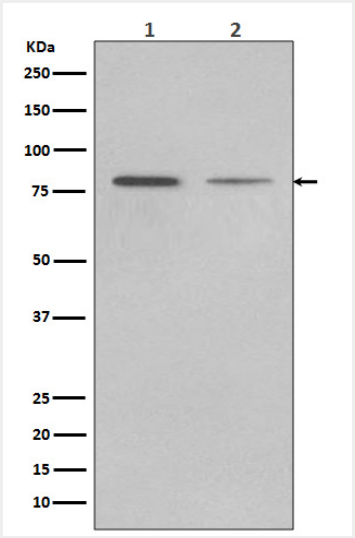
Immunohistochemical analysis of paraffin-embedded Human thyroid cancer, using the Antibody at 1:100 dilution.



Immunohistochemical analysis of paraffin-embedded Human prostate cancer, using the Antibody at 1:100 dilution.



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

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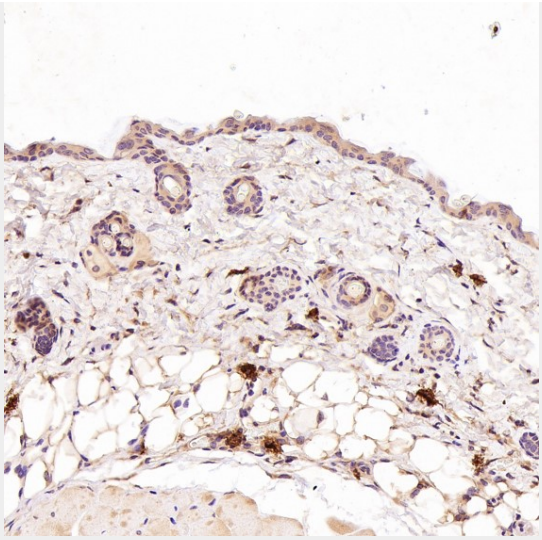
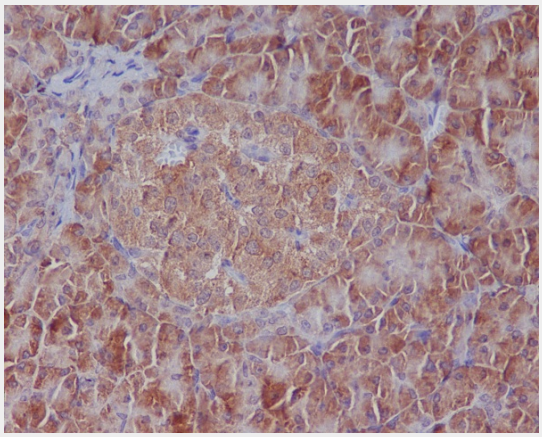
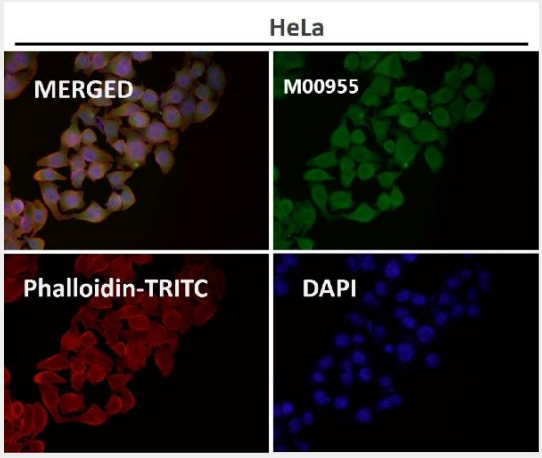


Immunohistochemical analysis of paraffin-embedded Mouse skin, using the Antibody at 1:200 dilution.



Immunohistochemical analysis of paraffin-embedded human pancreas, using GRP78 BiP Antibody.



Immunofluorescent analysis using the Antibody at 1:50 dilution.

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Immunofluorescent analysis of HepG2 cells, using GRP78 BiP Antibody.