

# BiP/GRP78 Mouse mAb

Catalog No.: A27312

## Basic Information

### Observed MW

78 kDa

### Calculated MW

72 kDa

### Category

Primary antibody

### Applications

WB, IHC-P, IF/ICC, ELISA

### Cross-Reactivity

Human, Mouse, Rat

### CloneNo number

AMC0725

## Background

The protein encoded by this gene is a member of the heat shock protein 70 (HSP70) family. This protein localizes to the lumen of the endoplasmic reticulum (ER) where it operates as a typical HSP70 chaperone involved in the folding and assembly of proteins in the ER and is a master regulator of ER homeostasis. During cellular stress, as during viral infection or tumorigenesis, this protein interacts with the transmembrane stress sensor proteins PERK (protein kinase R-like endoplasmic reticulum kinase), IRE1 (inositol-requiring kinase 1), and ATF6 (activating transcription factor 6) where it acts as a repressor of the unfolded protein response (UPR) and also plays a role in cellular apoptosis and senescence. Elevated expression and atypical translocation of this protein to the cell surface has been reported in viral infections and some types of cancer cells. At the cell surface this protein may facilitate viral attachment and entry to host cells. This gene is a therapeutic target for the treatment of coronavirus diseases and chemoresistant cancers.

## Recommended Dilutions

**WB** 1:10000 - 1:60000

**IHC-P** 1:4000 - 1:40000

**IF/ICC** 1:100 - 1:400

**ELISA** Recommended starting concentration is 1 µg/mL. Please optimize the concentration based on your specific assay requirements.

## Immunogen Information

### Gene ID

3309

### Swiss Prot

P11021

### Immunogen

Synthetic peptide. This information is considered to be commercially sensitive.

### Synonyms

BIP; GRP78; HEL-S-89n

## Contact

☎ | 400-999-6126

✉ | [cn.market@abclonal.com.cn](mailto:cn.market@abclonal.com.cn)

🌐 | [www.abclonal.com.cn](http://www.abclonal.com.cn)

## Product Information

### Source

Mouse

### Isotype

IgG1

### Purification

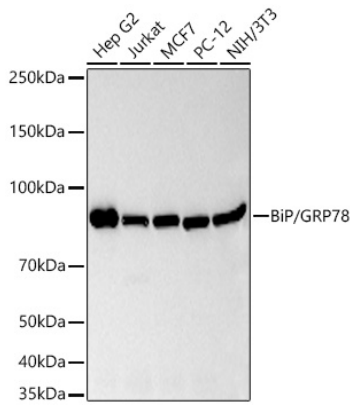
Affinity purification

### Storage

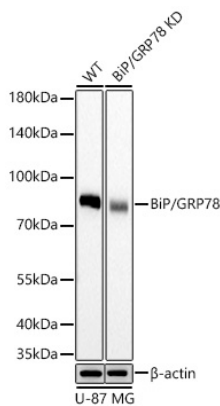
Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS containing 50% glycerol, preserved with proclin300 or sodium azide (as specified on the Certificate of Analysis), pH 7.3.

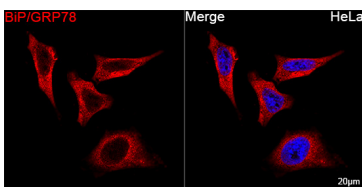
## Validation Data



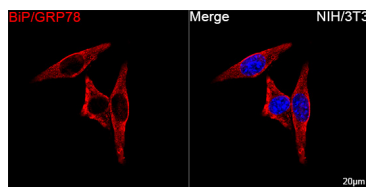
Western blot analysis of various lysates using BiP/GRP78 Mouse mAb (A27312) at 1:20000 dilution incubated overnight at 4°C.  
 Secondary antibody: HRP-conjugated Goat anti-Mouse IgG (H+L) (AS003) at 1:10000 dilution.  
 Lysates/proteins: 25 µg per lane.  
 Blocking buffer: 3% nonfat dry milk in TBST.  
 Detection: ECL Basic Kit (RM00020).  
 Exposure time: 45s.



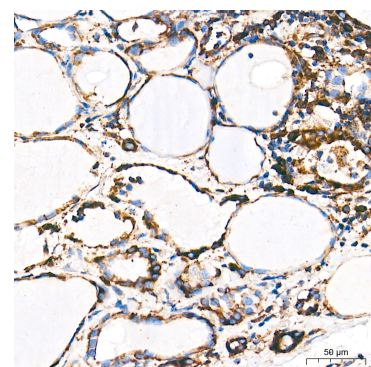
Western blot analysis of lysates from wild type (WT) and BiP/GRP78 knockdown (KD) U-87 MG cells using BiP/GRP78 Mouse mAb (A27312) at 1:20000 dilution incubated overnight at 4°C.  
 Secondary antibody: HRP-conjugated Goat anti-Mouse IgG (H+L) (AS003) at 1:10000 dilution.  
 Lysates/proteins: 25 µg per lane.  
 Blocking buffer: 3% nonfat dry milk in TBST.  
 Detection: ECL Basic Kit (RM00020).  
 Exposure time: 5s.



Confocal imaging of HeLa cells using BiP/GRP78 Mouse mAb (A27312, dilution 1:100) followed by a further incubation with Cy3-conjugated Goat anti-Mouse IgG (H+L) (AS008, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 100x.



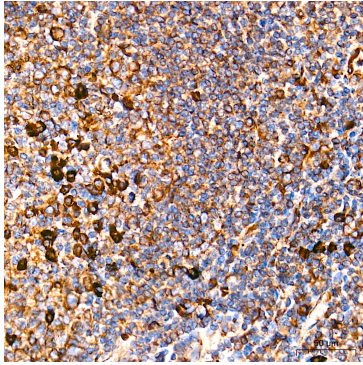
Confocal imaging of NIH/3T3 cells using BiP/GRP78 Mouse mAb (A27312, dilution 1:100) followed by a further incubation with Cy3-conjugated Goat anti-Mouse IgG (H+L) (AS008, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 100x.



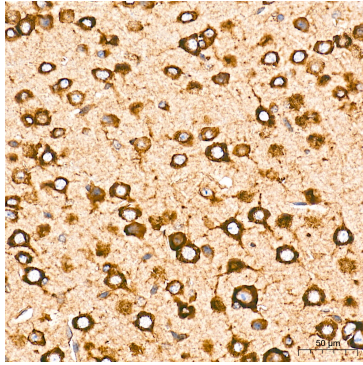
Immunohistochemistry analysis of paraffin-embedded Human thyroid tissue using BiP/GRP78 Mouse mAb (A27312) at a dilution of 1:4000 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.

## Validation Data

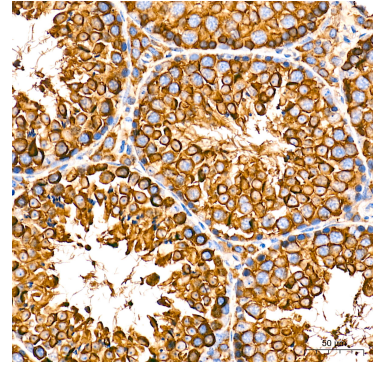
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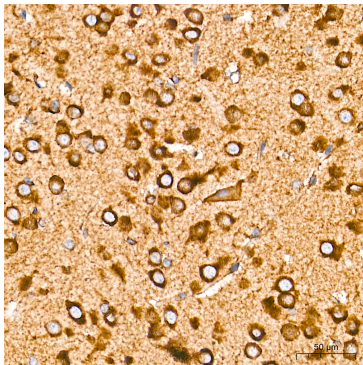
Immunohistochemistry analysis of paraffin-embedded Human tonsil tissue using BiP/GRP78 Mouse mAb (A27312) at a dilution of 1:4000 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Mouse brain tissue using BiP/GRP78 Mouse mAb (A27312) at a dilution of 1:4000 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Mouse testis tissue using BiP/GRP78 Mouse mAb (A27312) at a dilution of 1:4000 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Rat brain tissue using BiP/GRP78 Mouse mAb (A27312) at a dilution of 1:4000 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.