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# GRP78 (Bip) Antibody
**Catalog # ASM10436**

## Specification

### GRP78 (Bip) Antibody - Product Information

| | |
|---|---|
| Application | **WB** |
| Primary Accession | P11021 |
| Other Accession | NP_005338.1 |
| Host | **Rabbit** |
| Reactivity | **Human, Mouse, Rat, Dog, Drosophila** |
| Clonality | **Polyclonal** |

**Description**
Rabbit Anti-Human GRP78 (Bip) Polyclonal

**Target/Specificity**
Detects ~78kDa.

**Other Names**
BIP Antibody, Grp78 Antibody, HSPA5 Antibody, MIF2 Antibody, immunoglobulin heavy chain binding protein Antibody

**Immunogen**
Full length human GRP78 (Bip) his tagged at the N terminus

**Purification**
Protein A Purified

| | |
|---|---|
| Storage | **-20ºC** |

**Storage Buffer**
PBS, 50% glycerol, 0.09% sodium azide

| | |
|---|---|
| Shipping Temperature | **Blue Ice or 4ºC** |

**Certificate of Analysis**
0.5 µg/ml of SPC-180 was sufficient for detection of Grp78 in 10 µg of rat tissue lysate by ECL immunoblot analysis using goat anti-rabbit IgG:HRP as the secondary antibody.

**Cellular Localization**
Endoplasmic Reticulum | Endoplasmic Reticulum Membrane | Melanosome

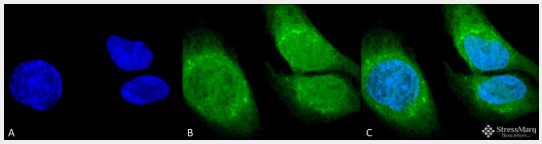
### GRP78 (Bip) Antibody - Protocols

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

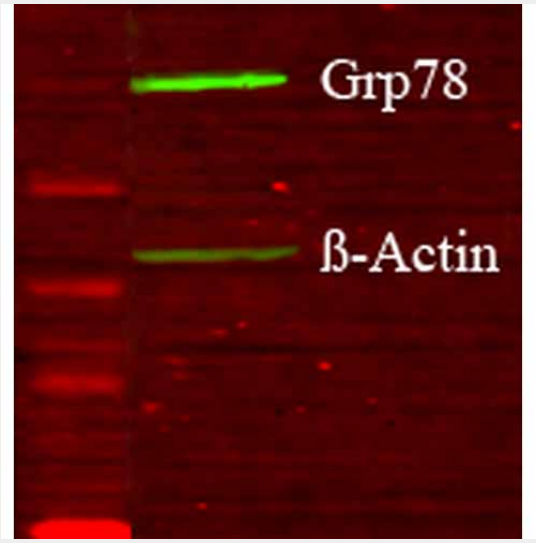
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation

- Flow Cytomety
- Cell Culture

**GRP78 (Bip) Antibody - Images**



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-GRP78 (Bip) Polyclonal Antibody (ASM10436). Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-GRP78 (Bip) Polyclonal Antibody (ASM10436) at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Melanosome. Cytoplasm. Nucleus. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-GRP78 (Bip) Antibody. (C) Composite. Heat Shocked at 42°C for 1h.




Western blot analysis of Human Glucose deprived glia cell lysates showing detection of GRP78 protein using Rabbit Anti-GRP78 Polyclonal Antibody (ASM10436). Primary Antibody: Rabbit Anti-GRP78 Polyclonal Antibody (ASM10436) at 1:1000.

**GRP78 (Bip) Antibody - Background**

GRP78 is a ubiquitously expressed, 78-kDa glucose regulated protein, and is commonly referred to as an immunoglobin chain binding protein (BiP). The BiP proteins are categorized as stress response proteins because they play an important role in the proper folding and assembly of nascent protein and in the scavenging of misfolded proteins in the endoplasmic reticulum lumen. Translation of BiP is directed by an internal ribosomal entry site (IRES) in the 5' non-translated region of the BiP mRNA. BiP IRES activity increases when cells are heat stressed (1). GRP78 is also critical for maintenance of cell homeostasis and the prevention of apoptosis (2). Luo et al. have provided findings that suggest GRP78 is essential for embryonic cell growth and pluripotent cell survival (3). In terms of diseases, GRP78 has been shown to be a reliable biomarker of hypoglycemia, to serve a neuroprotective function in neurons exposed to glutamate and oxidative stress (4), and its protein levels are reduced in the brains of Alzheimer’s patients (5). Also, the induction of the GRP78 protein that results in severe glucose and oxygen deprivation could possible lead to drug resistance to anti-tumor drugs (6, 7).

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1. Cho S., et al. (2007) Mol Cell Biol. 27(1): 368-83.
2. Yang Y., et al. (1998) J Biol Chem. 273: 25552-25555.
3. Luo S., et al (2006) 26 (15): 5688-97.
4. Yu Z., et al. (1999) Exp Neurol. 15: 302-314.
5. Koomagi R., et al. (1999) Anticancer Res. 19: 4333-4336.
6. Laquerre S., et al. (1998) J. Virology. 72: 4940-4949.
7. Dong D., et al. (2005) Cancer Res. 65(13): 5785-91.