

GRP78 Antibody
Catalog # ASM10364

Specification

GRP78 Antibody - Product Information

Application	WB, IHC, IP, ICC
Primary Accession	P06761
Other Accession	NP_037215.1
Host	Rabbit
Reactivity	Human, Mouse, Rat, Rabbit, Hamster, Monkey, Bovine, Xenopus, Dog
Clonality	Polyclonal

Description

Rabbit Anti-Rat GRP78 Polyclonal

Target/Specificity

Detects ~78kDa.

Other Names

BIP Antibody, Grp78 Antibody, HSPA5 Antibody, MIF2 Antibody, immunoglobulin heavy chain binding protein Antibody

Immunogen

Rat GRP78 (Bip) synthetic peptide conjugated to KLH

Purification

Peptide Affinity Purified

Storage **-20°C**

Storage Buffer

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature **Blue Ice or 4°C**

Certificate of Analysis

A 1:1000 dilution of SPC-107 was sufficient for detection of Grp78 in 10 µg of rat tissue lysate by ECL immunoblot analysis.

Cellular Localization

Endoplasmic Reticulum | Endoplasmic Reticulum Lumen | Melanosome | Cytoplasm

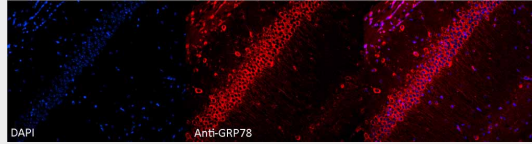
GRP78 Antibody - Protocols

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

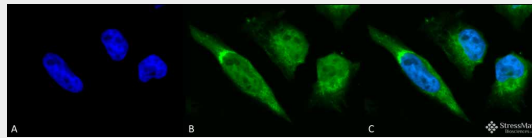
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)

- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

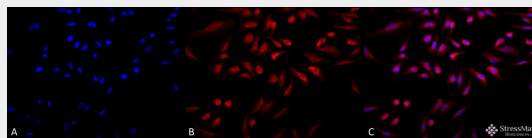
GRP78 Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-GRP78 Polyclonal Antibody (ASM10364). Tissue: Hippocampal Section. Species: Mouse. Fixation: 4% Formaldehyde for 12 hours at RT. Paraffin embedded.. Primary Antibody: Rabbit Anti-GRP78 Polyclonal Antibody (ASM10364) at 1:100 for 12 hours at 4°C. Secondary Antibody: Alexa Fluor 555 Goat Anti-Rabbit at 1:250 for 1 hour at RT. Counterstain: Hoechst at 1:1000 for 10 min at RT. Localization: Grp78 staining in mouse pyramidal cell layer.. Magnification: 20x. Slice thickness: 7 microns



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GRP78 Antibody - Background

GRP78 is a ubiquitously expressed, 78-kDa glucose regulated protein, and is commonly referred to as an immunoglobulin 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 possibly lead to drug resistance to

anti-tumor drugs (6, 7).

GRP78 Antibody - References

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.