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- Trockeneiszuschlag
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- Expressversand

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Anti-GRP78 Antibody [3C5-1A4]

Mouse Anti-Rat GRP78 Monoclonal IgG1 Kappa
Catalog No. SMC-210



Discovery through partnership | Excellence through quality

Overview

Product Name

GRP78 Antibody

Description

Mouse Anti-Rat GRP78 Monoclonal IgG1 Kappa

Species Reactivity

Human, Mouse, Rat

Applications

WB, ICC/IF, ELISA

Antibody Dilution

WB (1:1000), ICC/IF (1:100); optimal dilutions for assays should be determined by the user.

Host Species

Mouse

Immunogen Species

Rat

Immunogen

Full-length recombinant rat GRP78

Concentration

1 mg/ml

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

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

Storage Temperature

-20°C

Shipping Temperature

Blue Ice or 4°C

Purification

Protein G Purified

Clonality

Monoclonal

Clone Number

3C5-1A4

Isotype

IgG1 Kappa

Specificity

Detects ~78kDa.

Cite This Product

Mouse Anti-Rat GRP78 Monoclonal, Clone 3C5-1A4 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-210)

Certificate Of Analysis

1 µg/ml of SMC-210 was sufficient for detection of GRP78 in 20 µg of HEK-293 lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Biological Description

Alternative Names

78 kDa glucose regulated protein Antibody, 78 kDa glucose-regulated protein Antibody, AL022860 Antibody, AU019543 Antibody, BIP Antibody, D2Wsu141e Antibody, D2Wsu17e Antibody, Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78 Antibody, Endoplasmic reticulum lumenal Antibody, Ca2+ binding protein grp78 Antibody, FLJ26106 Antibody, Glucose Regulated Protein 78kDa Antibody, GRP 78 Antibody, GRP-78 Antibody, GRP78_HUMAN Antibody, Heat shock 70 kDa protein 5 Antibody, Heat Shock 70kDa Protein 5 Antibody, HSCe70 Antibody, HSPA 5 Antibody, HSPA5 Antibody, Immunoglobulin Heavy Chain Binding Protein Antibody, Immunoglobulin heavy chain-binding protein Antibody, mBiP Antibody, MIF2 Antibody, Sez7 Antibody

Research Areas

Cancer, Heat Shock, Cell Signaling, Chaperones, Organelle Markers, Trafficking

Cellular Localization

Endoplasmic Reticulum, Endoplasmic reticulum lumen, Melanosome

Accession Number

NP_037215.1

Gene ID

25617

Swiss Prot

P06761

Scientific 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' nontranslated 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

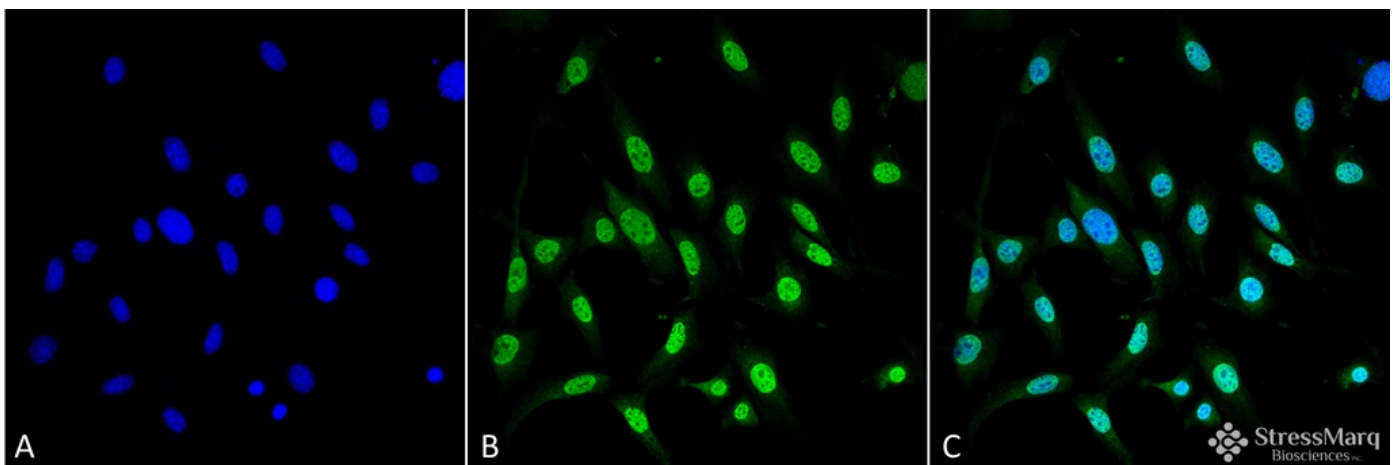
apoptosis (2). Luo et al. have provided findings that suggest GRP78 is essential for embryonic cell growth and pluripotent cell survival (3).

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 Alzheimers 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).

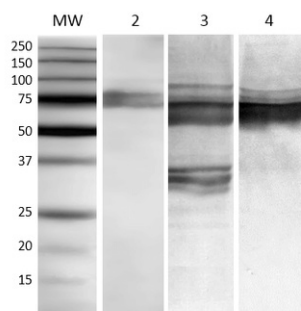
References

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.

Product Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-GRP78 Monoclonal Antibody, Clone 3C5-1A4 (SMC-210). Tissue: Fibroblast cell line (NIH 3T3). Species: Mouse. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-GRP78 Monoclonal Antibody (SMC-210) at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:100 for 60 min at RT. Counterstain: DAPI (blue) nuclear stain at 1:5000 for 5 min RT. Localization: Nucleus. Magnification: 60X.



Western Blot analysis of Human, Mouse, Rat NIH3T3, Rat Brain, and HEK-293 cell lysates showing detection of ~78 kDa GRP78 protein using Mouse Anti-GRP78 Monoclonal Antibody, Clone 3C5-1A4 (SMC-210). Lane 1: MW ladder. Lane 2: Mouse NIH3T3. Lane 3: Rat Brain. Lane 4: Human HEK-293. Block: 5% milk + TBST for 1 hour at RT. Primary Antibody: Mouse Anti-GRP78 Monoclonal Antibody (SMC-210) at 1:1000 for 1 hour at RT. Secondary Antibody: HRP Goat Anti-Mouse at 1:50 for 1 hour at RT. Color Development: TMB solution for 5 min at RT. Predicted/Observed Size: ~78 kDa.

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.