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## Produktinformation



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Diagnostik & molekulare Diagnostik



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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# Anti-GRP78 Antibody [6H4-2G7]

Mouse Anti-Human GRP78 Monoclonal IgG1  
Catalog No. SMC-196



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

GRP78 Antibody

### Description

Mouse Anti-Human GRP78 Monoclonal IgG1

### Species Reactivity

Human, Monkey, Mouse, Rat, African clawed frog (*Xenopus laevis*), Bovine, Chestnut Blight (*Cryphonectria parasitica*), Fungi, Hamster, Rabbit

### Applications

WB, ICC/IF, ELISA

### Antibody Dilution

WB (1:2000), ICC/IF (1:100); optimal dilutions for assays should be determined by the user.

### Host Species

Mouse

### Immunogen Species

Human

### Immunogen

His-tagged human 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

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### Storage Buffer

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

### Storage Temperature

-20°C

### Shipping Temperature

Blue Ice or 4°C

### Purification

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Protein G Purified

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**Clonality**

Monoclonal

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**Clone Number**

6H4-2G7

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**Isotype**

IgG1

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**Specificity**

Detects ~78kDa.

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**Cite This Product**

Mouse Anti-Human GRP78 Monoclonal, Clone 6H4-2G7 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-196)

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**Certificate Of Analysis**

0.5 µg/ml of SMC-196 was sufficient for detection of Grp78 in 10 µg of HeLa cell lysate by ECL immunoblot analysis.

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**Biological Description**

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**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 luminal Ca(2+)-binding protein grp78 Antibody, Endoplasmic reticulum luminal Antibody, Ca<sup>2+</sup> 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

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**Research Areas**

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

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**Cellular Localization**

Endoplasmic Reticulum, Endoplasmic reticulum lumen, Melanosome

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**Accession Number**

NP\_001156906.1

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**Gene ID**

14828

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**Swiss Prot**

P20029

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**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' 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). Lou 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).

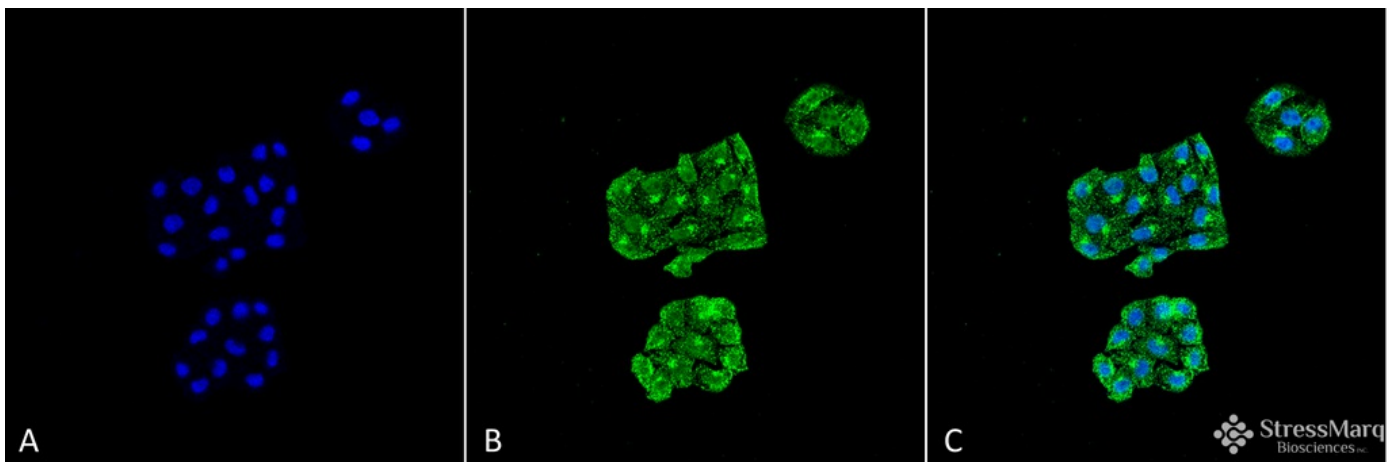
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## References

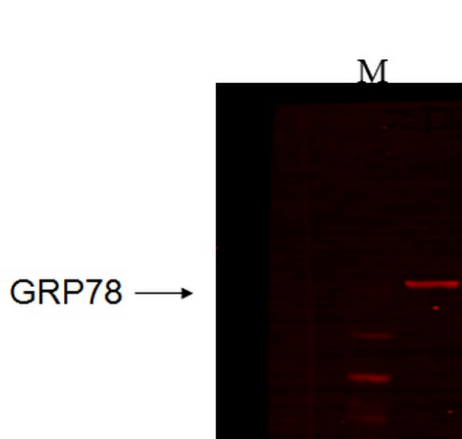
1. Cho S., et al. (2007) Mol Cell Biol. 27(1): 368-83.
  2. Yang Y., et al. (1998) J Biol Chem 273: 25552-25555.
  3. Luo S., et al (2006) 26 (15): 5688-97.
  4. Yu Z., et al. (1999) Exp Neurol. 15: 302-314.
  5. Koomagi R., et al. (1999) Anticancer Res. 19:4333-4336.
  6. Laquerre S., et al. (1998)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

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Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-GRP78 Monoclonal Antibody, Clone 6H4-2G7 (SMC-196). Tissue: Cervical Cancer cell line (HeLa). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-GRP78 Monoclonal Antibody (SMC-196) 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: Endoplasmic Reticulum, Endoplasmic Reticulum Lumen. Magnification: 60X.



Western Blot analysis of Human recombinant cell lysate showing detection of GRP78 protein using Mouse Anti-GRP78 Monoclonal Antibody, Clone 6H4.2G7 (SMC-196). Primary Antibody: Mouse Anti-GRP78 Monoclonal Antibody (SMC-196) at 1:1000.

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## Product Citations (0)

Currently there are no citations for this product.

## Reviews

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There are no reviews yet.