

## Product Datasheet

### GRP78 Antibody: Biotin (orb148008)

<b>Description</b>	Mouse monoclonal to GRP78 (Biotin). 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. GRP78 is also critical for maintenance of cell homeostasis and the prevention of apoptosis. Lou et al. have provided findings that suggest GRP78 is essential for embryonic cell growth and pluripotent cell survival. 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, and its protein levels are reduced in the brains of Alzheimers patients. 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 ..
<b>Species/Host</b>	Mouse
<b>Reactivity</b>	Bovine, Frog, Fungi, Hamster, Human, Monkey, Mouse, Plant, Rabbit, Rat
<b>Conjugation</b>	Biotin
<b>Tested Applications</b>	ELISA, ICC, IF, IHC, WB
<b>Immunogen</b>	His-tagged human GRP78
<b>Target</b>	GRP78
<b>Preservatives</b>	136.36mM Ethanolamine, and 9.55mM Sodium Bicarbonate in 95.45% PBS
<b>Concentration</b>	1 mg/ml
<b>Storage</b>	Conjugated antibodies should be stored according to the product label
<b>Note</b>	For research use only

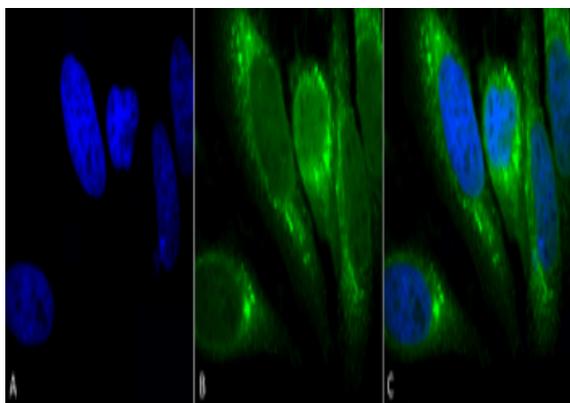
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<b>Application notes</b>	0.5 µg/ml of SMC-195 was sufficient for detection of Grp78 in 10 µg of rat tissue lysate by ECL immunoblot analysis.
<b>Isotype</b>	IgG2b
<b>Clonality</b>	Monoclonal
<b>Clone Number</b>	1H11-1H7
<b>MW</b>	78kDa
<b>Uniprot ID</b>	<b>P20029</b>
<b>NCBI</b>	<b>NP_001156906.1</b>
<b>Entrez</b>	<b>14828</b>
<b>Dilution Range</b>	WB (1:2000), ICC/IF (1:100)
<b>Expiration Date</b>	12 months from date of receipt.



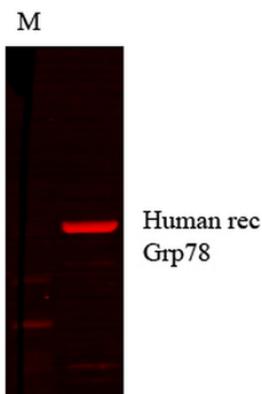
Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-GRP78 Monoclonal Antibody, Clone 1H11-1H7. Tissue: Heat Shocked cervical cancer cells (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Mouse Anti-GRP78 Monoclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Mouse (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. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-GRP78 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.

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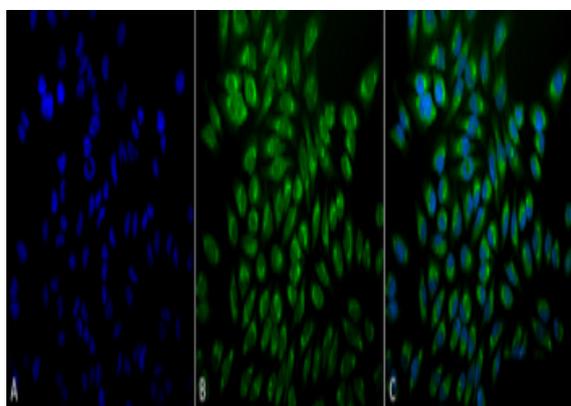
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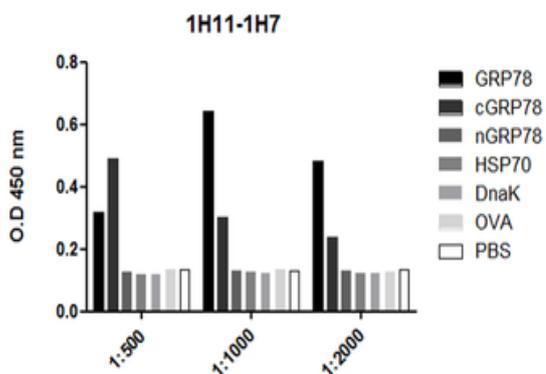
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Western Blot analysis of Human cell lysates showing detection of GRP78 protein using Mouse Anti-GRP78 Monoclonal Antibody, Clone 1H11-1H7. Primary Antibody: Mouse Anti-GRP78 Monoclonal Antibody at 1:1000.



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-GRP78 Monoclonal Antibody, Clone 1H11-1H7. Tissue: Heat Shocked cervical cancer cells (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Mouse Anti-GRP78 Monoclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Mouse (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. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-GRP78 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.



ELISA analysis using Mouse Anti-GRP78 Monoclonal Antibody, Clone 1H11-1H7. Primary Antibody: Mouse Anti-GRP78 Monoclonal Antibody. Secondary Antibody: Goat anti-mouse IgG: HRP at 1:10000.

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