

Anti-GRP78 / BiP Antibody [C9-9]

M1506-2



Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 72 kDa
Clone number:	C9-9

Description: Binding immunoglobulin protein (BiP) also known as 78 kDa glucose-regulated protein (GRP-78) or heat shock 70 kDa protein 5 (HSPA5) is a protein that in humans is encoded by the HSPA5 gene. BiP is a HSP70 molecular chaperone located in the lumen of the endoplasmic reticulum (ER) that binds newly synthesized proteins as they are translocated into the ER, and maintains them in a state competent for subsequent folding and oligomerization. BiP is also an essential component of the translocation machinery, as well as playing a role in retrograde transport across the ER membrane of aberrant proteins destined for degradation by the proteasome. Like many stress and heat shock proteins, BiP/GRP78 has potent immunological activity when released from the internal environment of the cell into the extracellular space. Specifically, it feeds anti-inflammatory and pro-resolutive signals into immune networks, thus helping to resolve inflammation.

Immunogen: Recombinant protein within human GRP78 aa 100-400.

Positive control: MCF7 cell lysate, HepG2 cell lysate, human brain tissue lysate, mouse brain tissue lysate, U-87 MG cell lysate, RAW264.7 cell lysate, RAW264.7 treated with 300nM Thapsigargin for 18 hours cell lysate, mouse liver tissue lysate, rat liver tissue lysate, rat pancreas tissue lysate, MCF-7, HepG2.

Subcellular location: Cytoplasm, endoplasmic reticulum lumen

Database links: SwissProt: P11021 Human | P20029 Mouse | P06761 Rat

Recommended Dilutions:

WB	1:1,000-1:5,000
IF-Cell	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Orders:0086-571-88062880

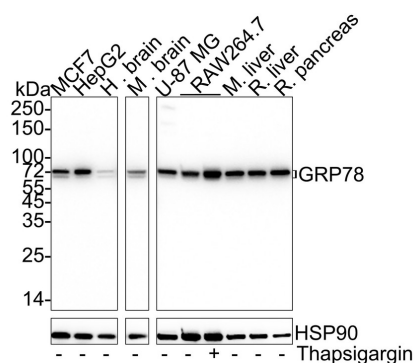
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Images

Fig1: Western blot analysis of GRP78 / BIP on different lysates with Mouse anti-GRP78 / BIP antibody (M1506-2) at 1/1,000 dilution.



Lane 1: MCF7 cell lysate (15 µg/Lane)

Lane 2: HepG2 cell lysate (15 µg/Lane)

Lane 3: Human brain tissue lysate (30 µg/Lane)

Lane 4: Mouse brain tissue lysate (30 µg/Lane)

Lane 5: U-87 MG cell lysate (30 µg/Lane)

Lane 6: RAW264.7 cell lysate (30 µg/Lane)

Lane 7: RAW264.7 treated with 300nM Thapsigargin for 18 hours cell lysate (30 µg/Lane)

Lane 8: Mouse liver tissue lysate (30 µg/Lane)

Lane 9: Rat liver tissue lysate (30 µg/Lane)

Lane 10: Rat pancreas tissue lysate (30 µg/Lane)

Predicted band size: 72 kDa

Observed band size: 70/72 kDa

Exposure time: Lane 1-4: 11 seconds; Lane 5-10: 4 seconds;
ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (M1506-2) at 1/1,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

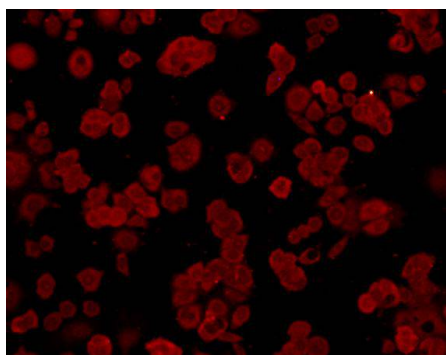


Fig2: ICC staining GRP78 / BIP in MCF-7 cells (red). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

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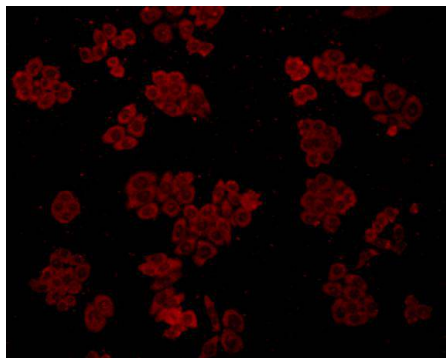


Fig3: ICC staining GRP78 / BiP in HepG2 cells (red). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. "Human XTP3-B forms an endoplasmic reticulum quality control scaffold with the HRD1-SEL1L ubiquitin ligase complex and BiP." Hosokawa N., Wada I., Nagasawa K., Moriyama T., Okawa K., Nagata K. *J. Biol. Chem.* 283:20914-20924(2008)
2. "Crystal structures of the ATPase domains of four human Hsp70 isoforms: HSPA1L/Hsp70-hom, HSPA2/Hsp70-2, HSPA6/Hsp70B', and HSPA5/BiP/GRP78." Wisniewska M., Karlberg T., Lehtio L., Johansson I., Kotenyova T., Moche M., Schuler H. *PLoS ONE* 5:E8625-E8625(2010)
3. "Adenosine-derived inhibitors of 78 kDa glucose regulated protein (Grp78) ATPase: insights into isoform selectivity." Macias A.T., Williamson D.S., Allen N., Borgognoni J., Clay A., Daniels Z., Dokurno P., Drysdale M.J., Francis G.L., Graham C.J., Howes R., Matassova N., Murray J.B., Parsons R., Shaw T., Surgenor A.E., Terry L., Wang Y., Wood M., Massey A.J. *J. Med. Chem.* 54:4034-4041(2011)

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