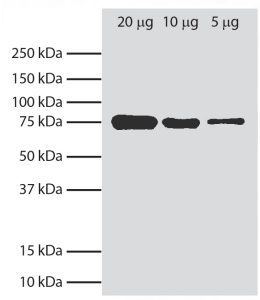
SouthernBiotech

Rat Anti-Mouse BiP

Cat. No.	Format	Size
1775-01	Purified (UNLB) Antibody	0.5 mg
1775-08	Biotin (BIOT) Conjugate	0.5 mg



Total cell lysates from Ag8.653 cells were resolved by electrophoresis, transferred to PVDF membrane, and probed with Rat Anti-Mouse BiP-UNLB (SB Cat. No. 1775-01). Proteins were visualized using Goat Anti-Rat Ig, Mouse ads-HRP (SB Cat. No. 3010-05) secondary antibody and chemiluminescent detection.

Overview

Clone	76-E6
Isotype	Rat (Fisher) $IgG_{2a}\kappa$
Immunogen	Mouse BiP:µ chain complexes
Specificity	Mouse BiP; Mr 78 kDa
Alternate Name(s)	GRP78

Description

The immunoglobulin heavy chain binding protein BiP is a member of the hsp70 family of heat shock proteins and is identical to the glucose regulated protein GRP78. While BiP was originally described for its function in B cells, it is now known to be distributed in a variety of tissues, if not ubiquitous. The highly conserved hsp70 proteins have an essential physiological role in stress responses and as "molecular chaperones" which are responsible for a variety of functions such as protein transport, prevention of protein toxicity and direction of protein folding. With regard to its immunological role, BiP is a component of the endoplasmic reticulum and binds free intracellular heavy chains in nonsecreting pre-B cell lines (μ^+,L^-) or incompletely assembled Ig precursors in H^+L^+ secreting hybridomas and myelomas. In the absence of light chain synthesis, heavy chains remain associated with BiP and are not secreted. BiP is an ATP binding protein and the dissociation of the BiP-heavy chain complex is probably driven by the ATPase activity attributed to BiP. The monoclonal antibody 76-E6 recognizes a conserved epitope localized within the region of amino acids 497 to 581 of BiP.

Applications

WB – Quality tested [2,3]
IP – Reported in literature [1]
ELISA – Reported in literature [1]

Working Dilutions

Immunoblotting	Purified (UNLB) antibody	≤ 5 µg/mL
	BIOT conjugate	≤ 5 µg/mL
Other Applications	Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.	

For Research Use Only. Not for Diagnostic or Therapeutic Use.

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Handling and Storage

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added*. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- Reagents are stable for the period shown on the label if stored as directed.

Warning

Some reagents contain sodium azide. Please refer to product specific (M)SDS.

References

1. Bole DG, Hendershot LM, Kearney JF. Posttranslational association of immunoglobulin heavy chain binding protein with nascent heavy chains in nonsecreting and secreting hybridomas. J Cell Biol. 1986;102:1558-66. (Immunogen, ELISA, IP)
2. Elkabetz Y, Argon Y, Bar-Nun S. Cysteines in C_H1 underlie retention of unassembled Ig heavy chains. J Biol Chem. 2005;280:14402-12. (WB)
3. Elkabetz Y, Shapira I, Rabinovich E, Bar-Nun S. Distinct steps in dislocation of luminal endoplasmic reticulum-associated degradation substrates: roles of endoplamic reticulum-bound p97/Cdc48p and proteasome. J Biol Chem. 2004;279:3980-89. (WB)

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