

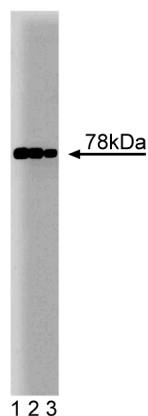
Technical Data Sheet

Purified Mouse Anti-BiP/GRP78**Product Information**

Material Number:	610978
Size:	50 µg
Concentration:	250 µg/ml
Clone:	40/BiP
Immunogen:	Human BiP/GRP78 aa. 525-628
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human Tested in Development: Dog, Rat, Mouse
Target MW:	78 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Synthesis of nascent proteins occurs at sites on the endoplasmic reticulum (ER) called translocons. Translocon proteins form a pore in the membrane that allow passage of the newly synthesized protein from the ribosome into the ER lumen. As the nascent protein enters the lumen, it is bound by BiP (**b**inding **p**rotein), the major chaperone of the ER. This protein is identical to the 78kDa glucose regulated protein, GRP78. BiP binds short hydrophobic sequences of the emerging peptide and prevents denaturation or nonspecific aggregation. Hydrolysis of ATP by BiP results in the release of the nascent protein which quickly assumes its proper conformation. However, if folding is incorrect, BiP again binds the protein and prevents its exit from the ER. In addition, BiP binding is thought to enhance the movement of secretory polypeptides across the ER membrane, but it is not required for protein translocation. It is 60% identical to Hsp70 and is similarly increased by conditions that produce incorrectly folded proteins. Thus, BiP is a chaperone of the ER lumen that binds misfolded or unassembled secretory proteins and ensures proper movement of proteins from the ER to the Golgi apparatus.



Western blot analysis of BiP on HepG2 cell lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-BiP antibody.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

Application Notes**Application**

Western blot	Routinely Tested
Immunofluorescence	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611555	HepG2 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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