

Technical Data Sheet

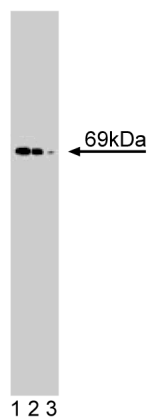
Purified Mouse Anti-ERp72**Product Information**

Material Number:	610970
Size:	50 µg
Concentration:	250 µg/ml
Clone:	3/ERp72
Immunogen:	Human ERp72 aa. 427-642
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Rat
Target MW:	69 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

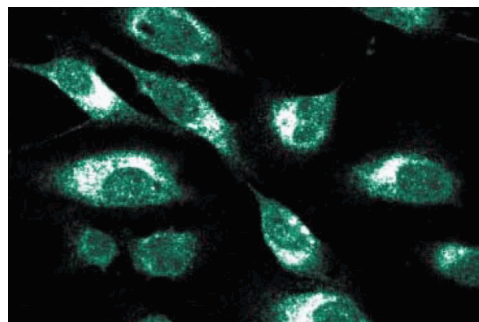
Description

Within the ER lumen, numerous molecular chaperones transiently bind nascent proteins and facilitate their folding or assembly. The action of chaperones ensures proper folding and, in turn, transport of new proteins from the rough ER to the Golgi complex. Some chaperones (grp78/Bip) bind to exposed hydrophobic segments, while others (ERp59/PDI) are involved in disulfide isomerization. An ERp59/PDI related protein, ERp72, contains three copies of the PDI active site, CGHC. Although ERp72 participates in disulfide isomerization, it is unclear whether it functions alone or in conjunction with other chaperones, specifically other members of the CGHC-containing protein family. Many chaperones, including PDI, are held within the ER via the common C-terminal KDEL sequence. ERp72 contains a related KEEL sequence that is essential for its ER retention. Additional studies have shown that ERp72 is a protease and a member of the thioredoxin superfamily known to bind Ca²⁺. Thus, ERp72 functions as a Ca²⁺-dependent chaperone with disulfide isomerization activity, but also may undertake other, yet undefined, roles within the ER.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of ERp72 on a Jurkat cell lysate (Human T-cell leukemia; ATCC TIB-152). Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-ERp72 antibody.



Immunofluorescence staining of human endothelial cells.

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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	Tested During Development

Recommended Assay Procedure:

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

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
611451	Jurkat Cell Lysate	500 µg	(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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Kuznetsov G, Chen LB, Nigam SK. Several endoplasmic reticulum stress proteins, including ERp72, interact with thyroglobulin during its maturation. *J Biol Chem.* 1994; 269(37):22990-22995.(Biology)

Mazzarella RA, Srinivasan M, Haugejorden SM, Green M. ERp72, an abundant luminal endoplasmic reticulum protein, contains three copies of the active site sequences of protein disulfide isomerase. *J Biol Chem.* 1990; 265(2):1094-1101.(Biology)

Nigam SK, Goldberg AL, Ho S, Rohde MF, Bush KT, Sherman MYu. A set of endoplasmic reticulum proteins possessing properties of molecular chaperones includes Ca(2+)-binding proteins and members of the thioredoxin superfamily. *J Biol Chem.* 1994; 269(3):1744-1749.(Biology)