Technical Data Sheet

Purified Mouse Anti-Calreticulin

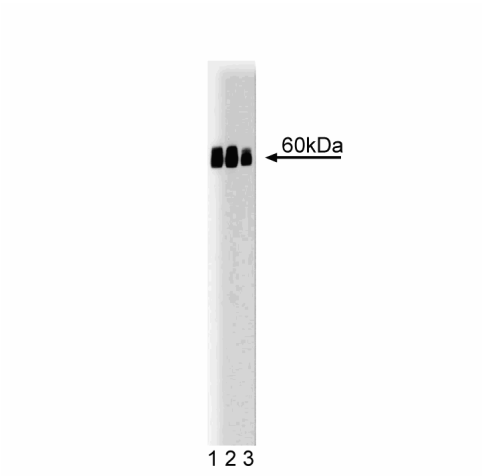
Product Information

Material Number:	**612137**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	16/Calreticulin
Immunogen:	Mouse Calreticulin aa. 270-390
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Mouse Tested in Development: Human, Rat
Target MW:	60 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

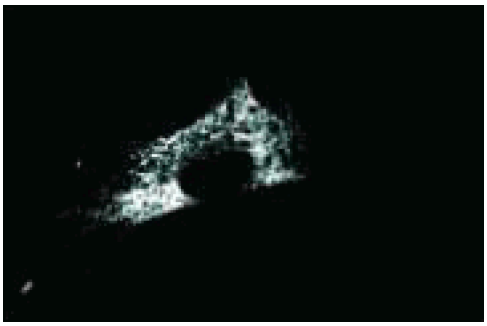
Description

Proteins undergo numerous modifications, including folding, translocation, and degradation. During such modifications, polypeptides are rarely in a native, stable state. Molecular chaperones are a diverse group of proteins that modulate polypeptide stability through ATP-dependent folding. Many chaperone proteins are found in the endoplasmic reticulum (ER). Calreticulin is a luminal ER protein that is 39% homologous to the ER chaperone protein, calnexin. Calreticulin contains a C-terminal KDEL ER retention signal, and can bind Ca2+, Zn2+, ATP, and the proteins, ERp57 and protein disulfide isomerase. The molecular chaperone activities of calreticulin may include folding of both Asn-linked glycoproteins and non-glycosylated proteins. In addition, calreticulin is a component of MHC I/transporter associated with Ag presentation (TAP) complex where it may function in peptide assembly onto nascent class I molecules. Calreticulin may also function in integrin signaling, since it binds a3-integrin subunits and regulates integrin-mediated metalloprotease secretion. Thus, calreticulin may be involved in Ca2+ storage, cell adhesion, and protein folding.

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 calreticulin on a mouse testis lysate. *Lane 1: 1:2500, lane 2: 1:5000, lane 3: 1:10000 dilution of the anti- calreticulin antibody.*



Immunoflourescence staining of the human lung cell line, WI38.

Preparation and Storage

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

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

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

Ito H, Seyama Y, Kubota S. Calreticulin is directly involved in anti-alpha3 integrin antibody-mediated secretion and activation of matrix metalloprotease-2. *Biochem Biophys Res Commun.* 2001; 283(2):297-302.(Biology)

Mazzarella RA, Gold P, Cunningham M, Green M. Determination of the sequence of an expressible cDNA clone encoding ERp60/calregulin by the use of a novel nested set method. *Gene.* 1992; 120(2):217-225.(Biology)

Nair S, Wearsch PA, Mitchell DA, Wassenberg JJ, Gilboa E, Nicchitta CV. Calreticulin displays in vivo peptide-binding activity and can elicit CTL responses against bound peptides. *J Immunol.* 1999; 162(11):6426-6432.(Biology)

Saito Y, Ihara Y, Leach MR, Cohen-Doyle MF, Williams DB. Calreticulin functions in vitro as a molecular chaperone for both glycosylated and non-glycosylated proteins. *EMBO J.* 1999; 18(23):6718-6729.(Biology)