Human Calreticulin Antibody

Monoclonal Mouse IgG_{2B} Clone # 326203

Catalog Number: MAB3898

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Calreticulin in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_{2B} Clone # 326203
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Calreticulin Met1-Asn180 Accession # P27797
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

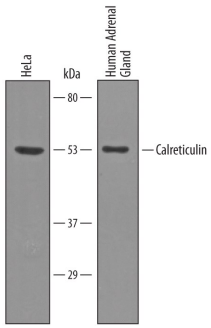
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Intracellular Staining by Flow Cytometry	0.25 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

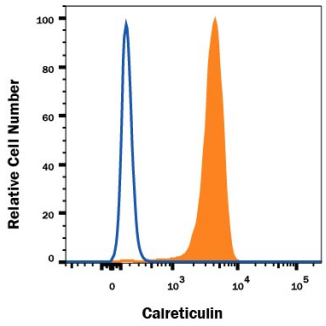
DATA

Western Blot



Detection of Human Calreticulin by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and human adrenal gland tissue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Calreticulin Monoclonal Antibody (Catalog # MAB3898) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Calreticulin at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Intracellular Staining by Flow Cytometry



Detection of Calreticulin in HeLa Human Cell Line by Flow Cytometry. HeLa human cervical epithelial carcinoma cell line was stained with Mouse Anti-Human Calreticulin Monoclonal Antibody (Catalog # MAB3898, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human Calreticulin is a 55-60 kDa, 400 amino acid, variably glycosylated intra- and extracellular Ca^{++}-binding lectin that is ubiquitously expressed. It consists of three domains: a 180 aa N-terminal globular region, a 111 aa P-, or proline rich domain, and a 109 aa C-terminus. The 180 aa N-terminus (aa 18-197) is termed Vasostatin. It is unclear if it is ever generated naturally via proteolytic processing. Vasostatin domain has many functions. It binds to RNA (aa 18-27), has autocatalytic phosphorylase activity (aa 77-197), binds to a KxFFKR motif on steroid hormone receptors, and serves as a lectin-type chaperone for ER-localized molecules. It also shows antiangiogenic activity, presumably by binding to laminin carbohydrates and blocking endothelial cell adhesion and proliferation. Human Calreticulin is 94% aa identical to mouse and rat Calreticulin.

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