Calnexin (N-terminal region)

Mouse Monoclonal

Cat. # CM4371
Size 100 µl

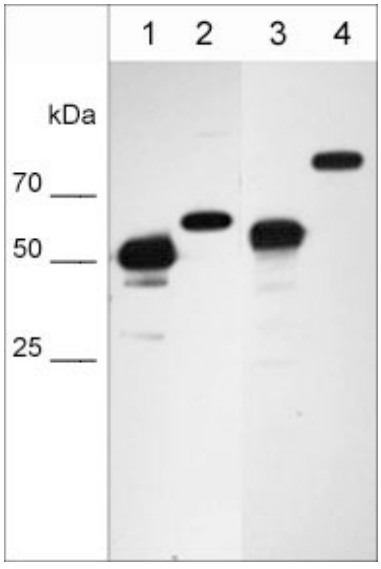
Background

Calnexin is a 90 kDa integral membrane protein located primarily in the endoplasmic reticulum (ER). The structure of calnexin includes a long N-terminal calcium-binding domain that extends into the lumen of the ER and a short, acidic cytosolic domain. Calnexin associates with several cell surface proteins as they pass through the ER, and may be involved in the Ca2+-dependent retention of proteins in the ER. The amino acid sequence of calnexin is highly conserved among various species and is similar in sequence to calreticulin, another Ca2+-binding protein found in the ER. Phosphorylation may regulate the activity of the C-terminal region of Calnexin. Both proline-dependent kinase and casein kinase sites have been identified, and the phosphorylation of these sites may regulate calnexin functions involved with detection of ER protein quality control and transport.

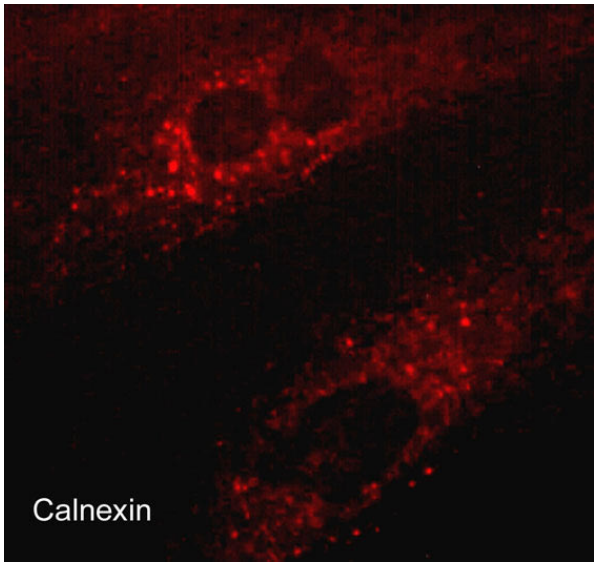
GO mAb
Guaranteed to Outperform

Background References

Wada, I. et al. (1991) J Biol Chem. 266(29):19599.
Bergeron, J.J. et al. (1994) Trends Biochem Sci. 19(3):124.
Chevet, E. et al. (2010) Semin Cell Dev Biol. 21(5):486.



Western blot image of cell structure markers in NCI-H1915 lung carcinoma cells. The blot was probed with anti-Vimentin intermediate filament protein VM4341 (lane 1), anti-Nucleoporin p62 NM4361 (lane 2), anti-Hsp60 mitochondrial protein HM4381 (lane 3), and anti-Calnexin endoplasmic reticulum protein CM4371 (lane 4).



Immunocytochemical labeling in paraformaldehyde fixed and NP-40 permeabilized rat A7r5 cells. The cells were labeled with mouse monoclonal Anti-Calnexin (CM4371), then the antibody was detected using Goat anti-Mouse secondary antibody conjugated to DyLight® 594.

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Immunogen

Uniprot ID: P27824

Clone M437 was generated from a recombinant protein corresponding to amino acid residues in the N-terminal region of human calnexin. This sequence has high homology to similar regions in rat and mouse Calnexin.

Buffer and Storage

Mouse monoclonal purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

Product Citations

Lin, Q. et al. (2017) J Cell Sci. 130(22):3839.
ICC: human A549 cells

Wang, TH et al. (2017) Oncogenesis. 6(7):e361.
WB: human A549 cells

Sun, A. et al. (2017) Autophagy. 13(3):522.
ICC: human A549 cells

Applications

WB	1:1000
ICC	1:50
ELISA	1:2000

Species Reactivity

Hu, Rt, Ms

Isotype: IgG1

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.
Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

This antibody detects a 90 kDa* protein corresponding to the apparent molecular mass of Calnexin on SDS-PAGE immunoblots of human HeLa and rat A7r5 cells. In immunocytochemistry, anti-Calnexin specifically stains endoplasmic reticulum and related vesicular structures in paraformaldehyde fixed and NP-40 permeabilized cells.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.
"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

EM3471 Early Endosome Antigen 1 (EEA1) Mouse Monoclonal
HM4381 Hsp60 (N-terminal region) Mouse Monoclonal
GM3421 GM130 (C-terminal region) Mouse Monoclonal
CM2811 Caveolin-1 Mouse Monoclonal
CM4371 Calnexin (N-terminal region) Mouse Monoclonal

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