SANTA CRUZ BIOTECHNOLOGY, INC.

Calnexin (AF18): sc-23954

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Calnexin and Calregulin (also called calreticulin) are calcium-binding proteins that are localized to the endoplasmic reticulum, Calnexin to the membrane and Calregulin to the lumen. Calnexin is a type I membrane protein that interacts with newly synthesized glycoproteins in the endoplasmic reticulum. It may play a role in assisting with protein assembly and in retaining unassembled protein subunits in the endoplasmic reticulum. Calregulin has both low- and high-affinity calcium-binding sites. Neither Calnexin nor Calregulin contains the calcium-binding "E-F hand" motif found in calmodulins. Calnexin and Calregulin are important for the maturation of glycoproteins in the endoplasmic reticulum and appear to bind many of the same proteins.

CHROMOSOMAL LOCATION

Genetic locus: CANX (human) mapping to 5q35.3; Canx (mouse) mapping to 11 B1.3.

SOURCE

Calnexin (AF18) is a mouse monoclonal antibody raised against human hepatoma cell line.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calnexin (AF18) is available conjugated to agarose (sc-23954 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-23954 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23954 PE), fluorescein (sc-23954 FITC), Alexa Fluor® 488 (sc-23954 AF488), Alexa Fluor® 546 (sc-23954 AF546), Alexa Fluor® 594 (sc-23954 AF594) or Alexa Fluor® 647 (sc-23954 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-23954 AF680) or Alexa Fluor® 790 (sc-23954 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Calnexin (AF18) is recommended for detection of Calnexin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Calnexin siRNA (h): sc-29233, Calnexin siRNA (m): sc-29884, Calnexin shRNA Plasmid (h): sc-29233-SH, Calnexin shRNA Plasmid (m): sc-29884-SH, Calnexin shRNA (h) Lentiviral Particles: sc-29233-V and Calnexin shRNA (m) Lentiviral Particles: sc-29884-V.

Molecular Weight of Calnexin: 90 kDa.

Positive Controls: A549 cell lysate: sc-2413, MCF7 whole cell lysate: sc-2206 or MDA-MB-231 cell lysate: sc-2232.

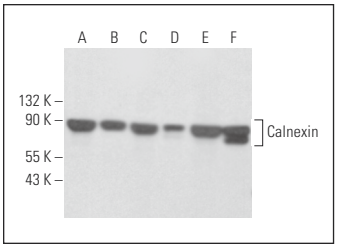
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

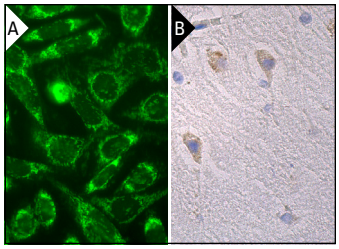
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Calnexin (AF18): sc-23954. Western blot analysis of Calnexin expression in A549 (**A**), MCF7 (**B**), JAR (**C**), U-2 OS (**D**), MDA-MB-231 (**E**) and NCI-H1299 (**F**) whole cell lysates.



Calnexin (AF18) Alexa Fluor® 488: sc-23954 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). Calnexin (AF18): sc-23954. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal cells (**B**).

SELECT PRODUCT CITATIONS

1. Blanco, S., et al. 2006. The subcellular localization of vaccinia-related kinase-2 (VRK2) isoforms determines their different effect on p53 stability in tumour cell lines. FEBS J. 273: 2487-2504.
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3. Gao, X. and Hannoush, R.N. 2014. Single-cell imaging of Wnt palmitoylation by the acyltransferase porcupine. Nat. Chem. Biol. 10: 61-68.
4. Konitsiotis, A.D., et al. 2015. Topological analysis of Hedgehog acyltransferase, a multipalmitoylated transmembrane protein. J. Biol. Chem. 290: 3293-3307.
5. Veglia, E., et al. 2016. Histamine type 1-receptor activation by low dose of histamine undermines human glomerular slit diaphragm integrity. Pharmacol. Res. 114: 27-38.
6. Allen, C., et al. 2017. Olefin isomers of a triazole bisphosphonate synergistically inhibit geranylgeranyl diphosphate synthase. Mol. Pharmacol. 91: 229-236.
7. Devarajan, A., et al. 2018. Paraoxonase 2 overexpression inhibits tumor development in a mouse model of ovarian cancer. Cell Death Dis. 9: 392.
8. E, X., et al. 2019. OR14I1 is a receptor for the human cytomegalovirus pentameric complex and defines viral epithelial cell tropism. Proc. Natl. Acad. Sci. USA 116: 7043-7052.
9. Handala, L., et al. 2020. BK polyomavirus hijacks extracellular vesicles for en bloc transmission. J. Virol. 94: e01834-19.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.