SANTA CRUZ BIOTECHNOLOGY, INC.

Calnexin (H-70): sc-11397

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.

REFERENCES

1. Smith, M.J., et al. 1989. Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a major calcium binding ER/SR protein. EMBO J. 8: 3581-3586.
2. David, V., et al. 1993. Interaction with newly synthesized and retained proteins in the endoplasmic reticulum suggests a chaperone function for human integral membrane protein IP90 (Calnexin). J. Biol. Chem. 268: 9585-9592.

CHROMOSOMAL LOCATION

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

SOURCE

Calnexin (H-70) is a rabbit polyclonal antibody raised against amino acids 1-70 of Calnexin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Calnexin (H-70) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Calnexin (H-70) is also recommended for detection of Calnexin in additional species, including canine, bovine and porcine.

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.

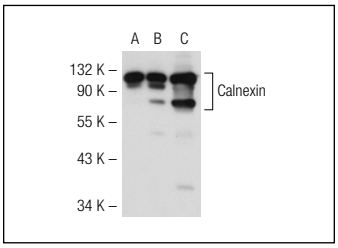
Molecular Weight of Calnexin: 90 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or Calnexin (h3): 293T Lysate: sc-170477.

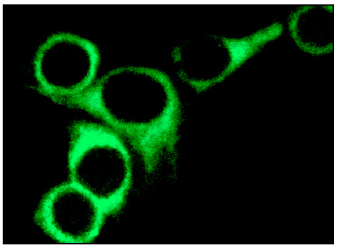
STORAGE

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

DATA



Calnexin (H-70): sc-11397. Western blot analysis of Calnexin expression in non-transfected 293T: sc-117752 (**A**), human Calnexin transfected 293T: sc-170477 (**B**) and HeLa (**C**) whole cell lysates.



Calnexin (H-70): sc-11397. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Walther, R.F., et al. 2003. Nuclear export of the glucocorticoid receptor is accelerated by cell fusion-dependent release of calreticulin. J. Biol. Chem. 278: 37858-37864.
2. Phan, D., et al. 2011. A novel protein kinase C target site in protein kinase D is phosphorylated in response to signals for cardiac hypertrophy. Biochem. Biophys. Res. Commun. 411: 335-341.
3. Chen, H., et al. 2011. Activation of STAT6 by STING is critical for antiviral innate immunity. Cell 147: 436-446.
4. Fahanik-Babaei, J., et al. 2011. Electro-pharmacological profile of a mitochondrial inner membrane big-potassium channel from rat brain. Biochim. Biophys. Acta 1808: 454-460.
5. Ferrario, C.R., et al. 2011. Distribution of AMPA receptor subunits and TARPs in synaptic and extrasynaptic membranes of the adult rat nucleus accumbens. Neurosci. Lett. 490: 180-184.
6. Eisfeld, A.J., et al. 2011. Human immunodeficiency virus rev-binding protein is essential for influenza a virus replication and promotes genome trafficking in late-stage infection. J. Virol. 85: 9588-9598.
7. Chen, L., et al. 2012. Possible mechanisms underlying the biphasic regulatory effects of arachidonic acid on Ca^{2+} signaling in HEK293 cells. Cell. Signal. 24: 1565-1572.
8. Zhu, Z., et al. 2012. Potential regulatory role of calsequestrin in platelet Ca^{2+} homeostasis and its association with platelet hyperactivity in diabetes mellitus. J. Thromb. Haemost. 10: 116-124.
9. Pérez-Pérez, R., et al. 2012. Uncovering suitable reference proteins for expression studies in human adipose tissue with relevance to obesity. PLoS ONE 7: e30326.

RESEARCH USE

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