SANTA CRUZ BIOTECHNOLOGY, INC.

Calnexin (6D195): sc-70481

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 (6D195) 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.

APPLICATIONS

Calnexin (6D195) 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)] and immunofluorescence (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: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

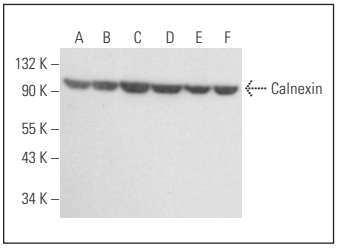
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

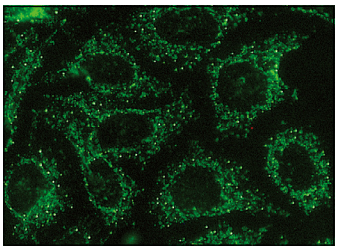
STORAGE

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

DATA



Calnexin (6D195): sc-70481. Western blot analysis of Calnexin expression in HeLa (**A**), A-431 (**B**), K-562 (**C**), Jurkat (**D**), MCF7 (**E**) and JAR (**F**) whole cell lysates.



Calnexin (6D195): sc-70481. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Wang, W., et al. 2010. Calnexin inhibits thermal aggregation and neurotoxicity of prion protein. J. Cell. Biochem. 111: 343-349.
2. Jagadish, N., et al. 2015. A-kinase anchor protein 4 (AKAP4) a promising therapeutic target of colorectal cancer. J. Exp. Clin. Cancer Res. 34: 142.
3. Jagadish, N., et al. 2016. Heat shock protein 70-2 (HSP70-2) is a novel therapeutic target for colorectal cancer and is associated with tumor growth. BMC Cancer 16: 561.
4. Nalaskowski, M.M., et al. 2018. Nuclear accumulation of SHIP1 mutants derived from AML patients leads to increased proliferation of leukemic cells. Cell. Signal. 49: 87-94.
5. Ming, Y., et al. 2019. iPla2β deficiency suppresses hepatic ER UPR, Fxr, and phospholipids in mice fed with MCD diet, resulting in exacerbated hepatic bile acids and biliary cell proliferation. Cells 8: 879.
6. Jagadish, N., et al. 2020. Knockdown of A-kinase anchor protein 4 inhibits proliferation of triple-negative breast cancer cells *in vitro* and *in vivo*. Tumour Biol. 42: 1010428320914477.
7. Hendricks, M.R., et al. 2021. Extracellular vesicles promote transkingdom nutrient transfer during viral-bacterial co-infection. Cell Rep. 34: 108672.
8. Zhang, Y., et al. 2022. Dync1li1 is required for the survival of mammalian cochlear hair cells by regulating the transportation of autophagosomes. PLoS Genet. 18: e1010232.

RESEARCH USE

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

CONJUGATES

See **Calnexin (AF18): sc-23954** for Calnexin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.