SANTA CRUZ BIOTECHNOLOGY, INC.

Calregulin (C-17): sc-6467

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 retainingunassembled 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: CALR (human) mapping to 19p13.2; Calr (mouse) mapping to 8 C3.

SOURCE

Calregulin (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Calregulin 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.

Blocking peptide available for competition studies, sc-6467 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calregulin (C-17) is recommended for detection of calregulin 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 (C-17) is also recommended for detection of calnexin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Calregulin siRNA (h): sc-29234, Calregulin siRNA (m): sc-29895, Calregulin shRNA Plasmid (h): sc-29234-SH, Calregulin shRNA Plasmid (m): sc-29895-SH, Calregulin shRNA (h) Lentiviral Particles: sc-29234-V or Calregulin shRNA (m) Lentiviral Particles: sc-29895-V.

Molecular Weight of Calregulin: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-MEL-28 cell lysate: sc-2236 or NIH/3T3 whole cell lysate: sc-2210.

RESEARCH USE

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

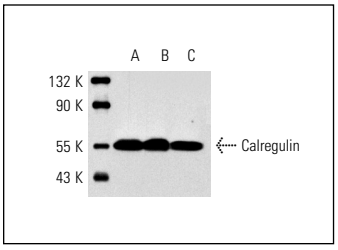
PROTOCOLS

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

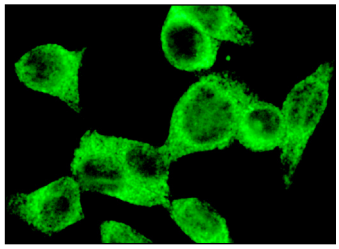
STORAGE

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

DATA



Calregulin (C-17): sc-6467. Western blot analysis of Calregulin expression in HeLa (**A**), SK-MEL-28 (**B**) and NIH/3T3 (**C**) whole cell lysates.



Calregulin (C-17): sc-6467. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. González, E., et al. 2002. Calreticulin-like molecule in trophozoites of *Entamoeba histolytica* HM1: IMSS (swissprot: accession P83003). Am. J. Trop. Med. Hyg. 67: 636-639.
2. Li, Y., et al. 2010. Characterization of a novel mechanism of genomic instability involving the SEI1/SET/NM23H1 pathway in esophageal cancers. Cancer Res. 70: 5695-5705.
3. Schardt, J.A., et al. 2010. Unfolded protein response suppresses CEBPA by induction of calreticulin in acute myeloid leukaemia. J. Cell. Mol. Med. 14: 1509-1519.
4. He, C., et al. 2010. A novel *Entamoeba histolytica* cysteine proteinase, EhCP4, is key for invasive amebiasis and a therapeutic target. J. Biol. Chem. 285: 18516-18527.
5. Zuo, J., et al. 2011. The Epstein-Barr virus-encoded BILF1 protein modulates immune recognition of endogenously processed antigen by targeting major histocompatibility complex class I molecules trafficking on both the exocytic and endocytic pathways. J. Virol. 85: 1604-1614.
6. Zuo, J., et al. 2011. Epstein-Barr virus evades $CD4^+$ T cell responses in lytic cycle through BZLF1-mediated downregulation of CD74 and the cooperation of vBcl-2. PLoS Pathog. 7: e100245.
7. Haefliger, S., et al. 2011. Protein disulfide isomerase blocks CEBPA translation and is up-regulated during the unfolded protein response in AML. Blood 117: 5931-5940.