

Calregulin (T-19): sc-7431

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

SOURCE

Calregulin (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Calregulin of mouse 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-7431 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calregulin (T-19) 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).

Calregulin (T-19) is also recommended for detection of Calregulin in additional species, including canine.

Suitable for use as control antibody for Calregulin siRNA (h): sc-29234, Calregulin siRNA (m): sc-29895, Calregulin siRNA (r): sc-63293, Calregulin shRNA Plasmid (h): sc-29234-SH, Calregulin shRNA Plasmid (m): sc-29895-SH, Calregulin shRNA Plasmid (r): sc-63293-SH, Calregulin shRNA (h) Lentiviral Particles: sc-29234-V, Calregulin shRNA (m) Lentiviral Particles: sc-29895-V and Calregulin shRNA (r) Lentiviral Particles: sc-63293-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.

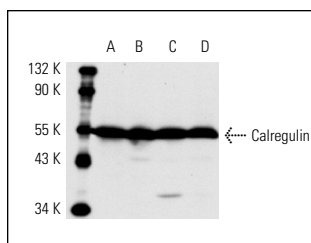
STORAGE

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

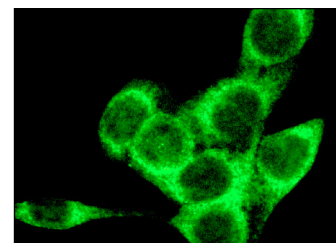
RESEARCH USE

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

DATA



Calregulin (T-19): sc-7431. Western blot analysis of Calregulin expression in HeLa (A), SK-MEL-28 (B), NIH/3T3 (C) and HL-60 (D) whole cell lysates.



Calregulin (T-19): sc-7431. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Le Naour, F., et al. 2001. Profiling changes in gene expression during differentiation and maturation of monocyte-derived dendritic cells using both oligonucleotide microarrays and proteomics. *J. Biol. Chem.* 276: 17920-17931.
2. Kleene, R., et al. 2010. Functional consequences of the interactions among the neural cell adhesion molecule NCAM, the receptor tyrosine kinase TrkB, and the inwardly rectifying K⁺ channel KIR3.3. *J. Biol. Chem.* 285: 28968-28979.
3. Hryciw, T., et al. 2010. The fibroblast growth factor receptor substrate 3 adapter is a developmentally regulated microtubule-associated protein expressed in migrating and differentiated neurons. *J. Neurochem.* 112: 924-993.
4. Jeffery, E., et al. 2011. The polypeptide binding conformation of calreticulin facilitates its cell-surface expression under conditions of endoplasmic reticulum stress. *J. Biol. Chem.* 286: 2402-2415.
5. Rizvi, S.M., et al. 2011. Distinct functions for the glycans of tapasin and heavy chains in the assembly of MHC class I molecules. *J. Immunol.* 186: 2309-2320.
6. Belorgey, D., et al. 2011. Characterisation of serpin polymers *in vitro* and *in vivo*. *Methods* 53: 255-266.
7. Peters, L.R. and Raghavan, M. 2011. Endoplasmic reticulum calcium depletion impacts chaperone secretion, innate immunity, and phagocytic uptake of cells. *J. Immunol.* 187: 919-931.



Try **Calregulin (F-4): sc-373863** or **Calregulin (H-10): sc-166839**, our highly recommended monoclonal alternatives to Calregulin (T-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Calregulin (F-4): sc-373863**.