

Calregulin (H-10): sc-166839

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 (H-10) is a mouse monoclonal antibody raised against amino acids 248-417 of Calregulin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Calregulin (H-10) is recommended for detection of Calregulin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

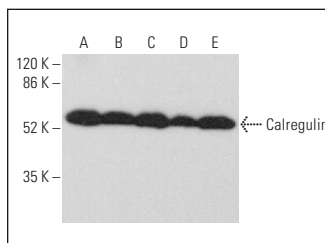
Molecular Weight of Calregulin: 55 kDa.

Positive Controls: AN3 CA cell lysate: sc-24662, HL-60 whole cell lysate: sc-2209 or THP-1 cell lysate: sc-2238.

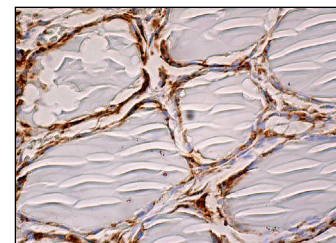
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Calregulin (H-10): sc-166839. Western blot analysis of Calregulin expression in HL-60 (A), AN3 CA (B), U-87 MG (C), HUV-EC-C (D) and THP-1 (E) whole cell lysates.



Calregulin (H-10): sc-166839. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Edin, F., et al. 2014. Differentiation of human neural progenitor cell-derived spiral ganglion-like neurons: a time-lapse video study. *Acta Otolaryngol.* 134: 441-447.
- Sabbir, M.G. 2019. Progesterone induced Warburg effect in HEK293 cells is associated with post-translational modifications and proteasomal degradation of progesterone receptor membrane component 1. *J. Steroid Biochem. Mol. Biol.* 191: 105376.
- Xian, Y., et al. 2019. Exenatide mitigates inflammation and hypoxia along with improved angiogenesis in obese fat tissue. *J. Endocrinol.* 242: 79-89.
- Sabbir, M.G., et al. 2020. Hypomorphic CAMKK2 in EA.hy926 endothelial cells causes abnormal transferrin trafficking, iron homeostasis and glucose metabolism. *Biochim. Biophys. Acta Mol. Cell Res.* E-published.

RESEARCH USE

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

CONJUGATES

See **Calregulin (F-4): sc-373863** for Calregulin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.