**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**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

Calregulin (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-45 near the N-terminus of Calregulin of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Calregulin (F-4) is available conjugated to agarose (sc-373863 AC), 500 µg/0.25 mg agarose in 1 ml, for IP; to HRP (sc-373863 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-373863 PE), fluorescein (sc-373863 FITC), Alexa Fluor® 488 (sc-373863 AF488) or Alexa Fluor® 647 (sc-373863 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-373863 P, 100 µg peptide in 0.5 ml PBS containing <0.1% sodium azide and 0.2% stabilizer protein.

**APPLICATIONS**

Calregulin (F-4) 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).


Molecular Weight of Calregulin: 55 kDa.

Positive Controls: rat liver extract: sc-2395, Jurkat whole cell lysate: sc-2204 or c4 whole cell lysate: sc-364186.

**DATA**

![Calregulin (F-4): Western blot analysis of Calregulin expression in Jurkat (A), c4 (B), 3T3-L1 (C), Neuro-2A (D) and C6 (E) whole cell lysates and rat liver tissue extract (F).](image_url)

![Calregulin (F-4): Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.](image_url)

**SELECT PRODUCT CITATIONS**


**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.

**PROTOCOLS**

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

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