SANTA CRUZ BIOTECHNOLOGY, INC.

Calretinin (B-8): sc-365695

The Power to Question

BACKGROUND

Calbindin D28K and Calretinin (also designated CR or 29 kDa Calbindin) are two closely related intracellular calcium-binding proteins belonging to the Troponin-C superfamily. Initially isolated from chick retina, Calretinin shares 58% identical residues with human Calbindin D28K. Calretinin is expressed in the brain and is particularly abundant in auditory neurons with precisely timed discharges. Neurons in the nucleus accumbens containing Calretinin all possess nuclear indentations. Calretinin-immunoreactive boutons form asymmetrical and symmetrical synaptic specializations on spines, dendrites and somata. The symmetrical synaptic specializations have medium-sized spiny neurons and contact other Calretinin-immunoreactive somata. Calretinin is widely used as a immunocytochemical marker for mesothelioma.

REFERENCES

1. Rogers, J.H. 1987. Calretinin: a gene for a novel calcium-binding protein expressed principally in neurons. J. Cell Biol. 105: 1343-1353.
2. Parmentier, M. and Lefort, A. 1991. Structure of the human brain calcium-binding protein calretinin and its expression in bacteria. Eur. J. Biochem. 196: 79-85.
3. Doglioni, C., Tos, A.P., Laurino, L., Iuzzolino, P., Chiarelli, C., Celio, M.R. and Viale, G. 1996. Calretinin: a novel immunocytochemical marker for mesothelioma. Am. J. Surg. Pathol. 20: 1037-1046.
4. Hussain, Z., Johnson, L.R. and Totterdell, S. 1996. A light and electron microscopic study of NADPH-diaphorase-, calretinin- and parvalbumin-containing neurons in the rat nucleus accumbens. J. Chem. Neuroanat. 10: 19-39.
5. Dreher, B., Barker, D.A., Bath, M.R. and Keay, K.A. 1996. Spatiotemporal pattern of ontogenetic expression of calbindin-28/kD in the retinorecipient layers of rat superior colliculus. J. Comp. Neurol. 376: 223-240.

CHROMOSOMAL LOCATION

Genetic locus: CALB2 (human) mapping to 16q22.2; Calb2 (mouse) mapping to 8 E1.

SOURCE

Calretinin (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-27 at the N-terminus of Calretinin of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 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.

RESEARCH USE

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

APPLICATIONS

Calretinin (B-8) is recommended for detection of Calretinin 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).

Calretinin (B-8) is also recommended for detection of Calretinin in additional species, including equine and porcine.

Suitable for use as control antibody for Calretinin siRNA (h): sc-43347, Calretinin siRNA (m): sc-43348, Calretinin shRNA Plasmid (h): sc-43347-SH, Calretinin shRNA Plasmid (m): sc-43348-SH, Calretinin shRNA (h) Lentiviral Particles: sc-43347-V and Calretinin shRNA (m) Lentiviral Particles: sc-43348-V.

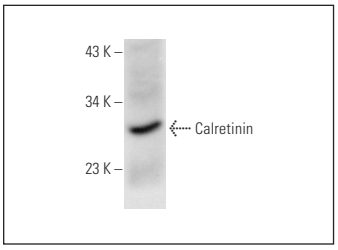
Molecular Weight of Calretinin: 29 kDa.

Positive Controls: rat brain extract: sc-2392, mouse brain extract: sc-2253 or rat cerebrum tissue extract.

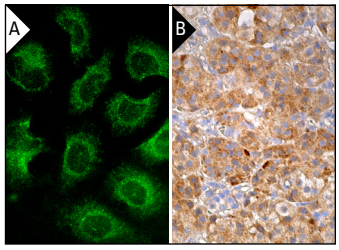
RECOMMENDED SECONDARY REAGENTS

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



Calretinin (B-8): sc-365695. Western blot analysis of Calretinin expression in rat brain tissue extract.



Calretinin (B-8): sc-365695. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal tissue showing cytoplasmic staining of glandular cells (**B**).

PROTOCOLS

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