

Calretinin (34): sc-135853

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 an 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. 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.
4. 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.
5. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Calretinin (34) is a mouse monoclonal antibody raised against amino acids 38-151 of Calretinin of rat origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 500 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

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

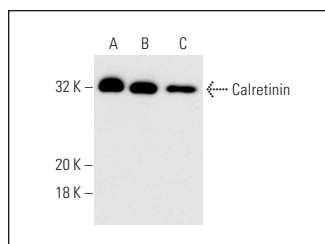
Calretinin (34) is recommended for detection of Calretinin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

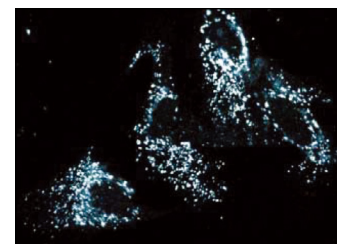
Molecular Weight of Calretinin: 29 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or rat cerebellum extract: sc-2398.

DATA



Calretinin (34): sc-135853. Western blot analysis of Calretinin expression in rat brain (A), mouse brain (B) and rat cerebellum (C) tissue extracts.



Calretinin (34): sc-135853. Immunofluorescence staining of human endothelial cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Ortolan, E., Arisio, R., Morone, S., Bovino, P., Lo-Buono, N., Nacci, G., Parrotta, R., Katsaros, D., Rapa, I., Migliaretti, G., Ferrero, E., Volante, M. and Funaro, A. 2010. Functional role and prognostic significance of CD157 in ovarian carcinoma. *J. Natl. Cancer Inst.* 102: 1160-1177.
2. Petrs-Silva, H., Dinculescu, A., Li, Q., Deng, W.T., Pang, J.J., Min, S.H., Chiodo, V., Neeley, A.W., Govindasamy, L., Bennett, A., Agbandje-McKenna, M., Zhong, L., Li, B., Jayandharan, G.R., et al. 2011. Novel properties of tyrosine-mutant AAV2 vectors in the mouse retina. *Mol. Ther.* 19: 293-301.
3. Pan, Y.W., Wang, W. and Xia, Z. 2013. Assessment of adult neurogenesis in mice. *Curr. Protoc. Toxicol.* 12: Unit12.20.

RESEARCH USE

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