SANTA CRUZ BIOTECHNOLOGY, INC.

Calretinin (H-5): sc-365956

SANTA CRUZ BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

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

SOURCE

Calretinin (H-5) 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calretinin (H-5) is available conjugated to agarose (sc-365956 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365956 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365956 PE), fluorescein (sc-365956 FITC), Alexa Fluor® 488 (sc-365956 AF488), Alexa Fluor® 546 (sc-365956 AF546), Alexa Fluor® 594 (sc-365956 AF594) or Alexa Fluor® 647 (sc-365956 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365956 AF680) or Alexa Fluor® 790 (sc-365956 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365956 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Calretinin (H-5) 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).

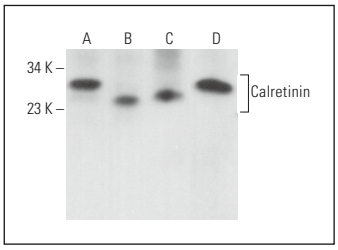
Calretinin (H-5) is also recommended for detection of Calretinin in additional species, including equine and porcine.

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.

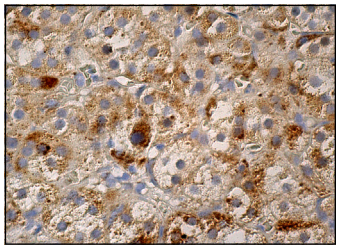
Molecular Weight of Calretinin: 29 kDa.

Positive Controls: human adrenal gland extract: sc-363761, rat cerebellum extract: sc-2398 or human cerebellum extract: sc-516706.

DATA



Calretinin (H-5): sc-365956. Western blot analysis of Calretinin expression in human cerebellum (**A**), human brain (**B**), human adrenal gland (**C**) and rat cerebellum (**D**) tissue extracts.



Calretinin (H-5): sc-365956. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Rizzo, A., et al. 2014. Transforming activities of *Chlamydia pneumoniae* in human mesothelial cells. Int. Microbiol. 17: 185-193.
2. He, F., et al. 2019. Critical role for phosphatidylinositol-3 kinase Vps34/ PIK3C3 in ON-bipolar cells. Invest. Ophthalmol. Vis. Sci. 60: 2861-2874.
3. Kim, S.H., et al. 2020. Identification of recurrent FHL2-GLI2 oncogenic fusion in sclerosing stromal tumors of the ovary. Nat. Commun. 11: 44.
4. Sauter, M.M., et al. 2021. Knockdown of TRIM5α or TRIM11 increases lentiviral vector transduction efficiency of human muller cells. Exp. Eye Res. 204: 108436.
5. Li, X., et al. 2022. Targeting long noncoding RNA-AQP4-AS1 for the treatment of retinal neurovascular dysfunction in diabetes mellitus. EBioMedicine 77: 103857.

RESEARCH USE

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