SANTA CRUZ BIOTECHNOLOGY, INC.

Calbindin D28K (C-20): sc-7691

The Power to Question

BACKGROUND

The family of EF-hand type Ca^{2+}-binding proteins includes Calbindin D28K, Calbindin D9K, S-100 α and β, Calgranulin A (also designated MRP8), Calgranulin B (also designated MRP14), Calgranulin C and the Parvalbumin family members, including Parvalbumin α and Parvalbumin β (also designated oncomodulin). Calbindin D28K, also known as calbindin, CALB1, D-28K or vitamin D-dependent calcium-binding protein, is a 261 amino acid protein with 6 EF-hand domains, 4 of which are active calcium-binding domains. Expressed in brain, ovary, uterus, testis, pancreas, liver, kidney and intestine, Calbindin D28K acts as a calcium-buffering agent and alters the activity of the plasma membrane ATPase. In neuronal cells, Calbindin D28K modulates calcium channel activity, calcium transients and intrinsic neuronal firing activity. Also, Calbindin D28K has been implicated to play a role in apoptosis and microtubule function.

CHROMOSOMAL LOCATION

Genetic locus: CALB1 (human) mapping to 8q21.3; Calb1 (mouse) mapping to 4 A2.

SOURCE

Calbindin D28K (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Calbindin D28K of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7691 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calbindin D28K (C-20) is recommended for detection of Calbindin D28K 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Calbindin D28K (C-20) is also recommended for detection of Calbindin D28K in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Calbindin D28K siRNA (h): sc-29878, Calbindin D28K siRNA (m): sc-29879, Calbindin D28K shRNA Plasmid (h): sc-29878-SH, Calbindin D28K shRNA Plasmid (m): sc-29879-SH, Calbindin D28K shRNA (h) Lentiviral Particles: sc-29878-V and Calbindin D28K shRNA (m) Lentiviral Particles: sc-29879-V.

Molecular Weight of Calbindin D28K: 28 kDa.

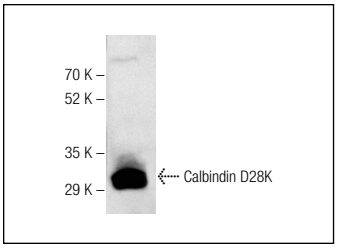
STORAGE

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

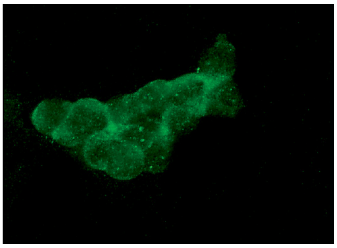
RESEARCH USE

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

DATA



Calbindin D28K (C-20): sc-7691. Western blot analysis of Calbindin D28K expression in mouse brain tissue extract..



Calbindin D28K (C-20): sc-7691. Immunofluorescence staining of methanol-fixed IMR-32 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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2. Fu, Y.S., et al. 2004. Transformation of human umbilical mesenchymal cells into neurons *in vitro*. J. Biomed. Sci. 11: 652-660.
3. Jiang, Y.H., et al. 2004. A mixed epigenetic/genetic model for oligogenic inheritance of autism with a limited role for UBE3A. Am. J. Med. Genet. A 131: 1-10.
4. Tayebati, S.K., et al. 2004. Age-related changes of muscarinic cholinergic receptor subtypes in the striatum of Fisher 344 rats. Exp. Gerontol. 39: 217-223.
5. Burn, S.F., et al. 2011. Calcium/NFAT signalling promotes early nephrogenesis. Dev. Biol. 352: 288-298.
6. Yu, Q., et al. 2011. Oxytocin is expressed by both intrinsic sensory and secretomotor neurons in the enteric nervous system of guinea pig. Cell Tissue Res. 344: 227-237.
7. Avula, L.R., et al. 2011. The effect of inflammation on the expression and distribution of the MAS-related gene receptors MrgE and MrgF in the murine ileum. Histochem. Cell Biol. 136: 569-585.
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