

Calbindin D28K (H-50): sc-28285

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 (H-50) is a rabbit polyclonal antibody raised against amino acids 35-84 mapping near the N-terminus of Calbindin D28K of human origin.

PRODUCT

Each vial contains 200 μg IgG 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.

APPLICATIONS

Calbindin D28K (H-50) 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 (H-50) is also recommended for detection of Calbindin D28K in additional species, including equine, 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.

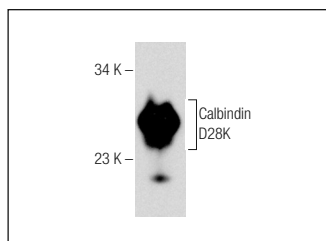
Molecular Weight of Calbindin D28K: 28 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat small intestine extract: sc-364811.

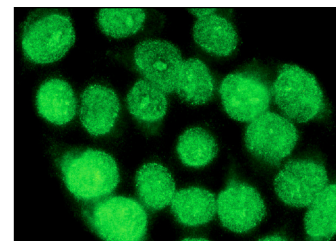
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Calbindin D28K (H-50): sc-28285. Western blot analysis of Calbindin D28K expression in rat small intestine tissue extract.



Calbindin D28K (H-50): sc-28285. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Csillik, B., et al. 2006. Calcium-binding proteins in GABAergic calyciform synapses of the reticular nucleus. *Neuroreport* 17: 575-578.
- Sehic, A., et al. 2010. Gene expression and dental enamel structure in developing mouse incisor. *Eur. J. Oral Sci.* 118: 118-130.
- Xi, Q., et al. 2010. Adenovirus-delivered microRNA targeting the vitamin D receptor reduces intracellular Ca^{2+} concentrations by regulating the expression of Ca^{2+} -transport proteins in renal epithelial cells. *BJU Int.* 107: 1314-1319.
- Patel, R.S., et al. 2011. Cytarabine induced cerebellar neuronal damage in juvenile rat: correlating neurobehavioral performance with cellular and genetic alterations. *Toxicology* 293: 41-52.
- Xi, Q.L., et al. 2011. Effect of silencing VDR gene in kidney on renal epithelial calcium transporter proteins and urinary calcium excretion in genetic hypercalciuric stone-forming rats. *Urology* 78: 1442.e1-1442.e7.

RESEARCH USE

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



Try **Calbindin D28K (D-4): sc-365360** or **Calbindin D28K (AF2E5): sc-135666**, our highly recommended monoclonal alternatives to Calbindin D28K (H-50). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Calbindin D28K (D-4): sc-365360**.