

Calbindin D28K (N-18): sc-7692

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 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at 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.

Blocking peptide available for competition studies, sc-7692 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Calbindin D28K (N-18) 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), 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).

Calbindin D28K (N-18) 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.

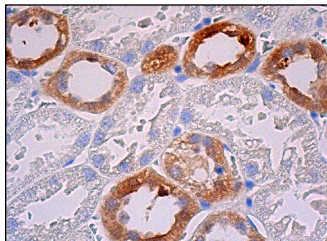
Molecular Weight of Calbindin D28K: 28 kDa.

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

STORAGE

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

DATA



Calbindin D28K (N-18): sc-7692. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in a subset of tubules.

SELECT PRODUCT CITATIONS

- Gorrill, T.S. and Khalili, K. 2005. Cooperative interaction of p65 and C/EBP β modulates transcription of BKV early promoter. *Virology* 335: 1-9.
- Kim, Y.D., et al. 2007. Effect of low-level laser treatment after installation of dental titanium implant-immunohistochemical study of RANKL, RANK, OPG: an experimental study in rats. *Lasers Surg. Med.* 39: 441-450.
- Finckbone, V., et al. 2009. Regional differences in the temporal expression of non-apoptotic caspase-3-positive bergmann glial cells in the developing rat cerebellum. *Front. Neuroanat.* 3: 3.
- Leeuwis, J.W., et al. 2011. Direct visualization of Smad1/5/8-mediated transcriptional activity identifies podocytes and collecting ducts as major targets of BMP signalling in healthy and diseased kidneys. *J. Pathol.* 224: 121-132.
- Stenger, C., et al. 2012. Brain region-specific immunolocalization of the lipolysis-stimulated lipoprotein receptor (LSR) and altered cholesterol distribution in aged LSR^{+/+} mice. *J. Neurochem.* 123: 467-476.
- Honda, T., et al. 2013. Regulation of adipocyte differentiation of 3T3-L1 cells by PDZRN3. *Am. J. Physiol., Cell Physiol.* 304: C1091-C1097.

RESEARCH USE

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

PROTOCOLS

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



Try **Calbindin D28K (D-4): sc-365360** or **Calbindin D28K (AF2E5): sc-135666**, our highly recommended monoclonal alternatives to Calbindin D28K (N-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Calbindin D28K (D-4): sc-365360**.