**Background**

The family of EF-hand type Ca^{2+}-binding proteins includes Calbindin D28K, Calbindin D8K, S-100 α and β, Calgranulin A (also designated MRPA8), Calgranulin B (also designated MRPA14), 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.

**References**


2. Parmentier, M., et al. 1991. The human Calbindin D28k (CALB1) and calretinin (CALB2) genes are located at 8q21.3-q22.1 and 16q22-q23, respectively, suggesting a common duplication with the carbonic anhydrase isozyme loci. Cytogenet. Cell Genet. 57: 41-43.


**Chromosomal Location**

Genetic locus: CALB1 (human) mapping to 8p21.3; Calb1 (mouse) mapping to 4 A2.

**Source**

Calbindin D28K (D-4) is a mouse monoclonal 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; kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calbindin D28K (D-4) is available conjugated to agarose (sc-365360 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365360 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365360 PE), fluorescein (sc-365360 FITC), Alexa Fluor® 488 (sc-365360 AF488), Alexa Fluor® 546 (sc-365360 AF546), Alexa Fluor® 594 (sc-365360 AF594) or Alexa Fluor® 647 (sc-365360 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FC; and to either Alexa Fluor®680 (sc-365360 AF680) or Alexa Fluor®790 (sc-365360 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**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 (D-4) is recommended for detection of Calbindin D28K 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).

Calbindin D28K (D-4) is also recommended for detection of Calbindin D28K in additional species, including 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-29879-V and Calbindin D28k shRNA (m) Lentiviral Particles: sc-29879-V.

Molecular Weight of Calbindin D28K: 28 kDa.

Positive Controls: mouse cerebellum extract: sc-2403, rat brain extract: sc-2392 or mouse kidney extract: sc-2255.

**Data**

**Select Product Citations**


**Research Use**

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