Synaptic Systems

Rudolf-Wissell-Str. 28
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

Calbindin D28k

Cat.No. 214 011C5; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized, fluorescence-labeled with Oyster® 650. Rabbit serum albumin was added for stabilization. For reconstitution add 100 µl H_2O to get a 1mg/ml solution in PBS. Either add 1:1 (v/v) glycerol, then aliquot and store at -20°C until use, or store aliquots at -80°C without additives. Reconstitute immediately upon receipt! Avoid bright light when working with the antibody to minimize photo bleeching of the fluorescent dye.The mounting agent Aquatex®(Merck Chemicals) is not compatible with Oyster dyes!
Applications	**WB**: N/A **IP**: N/A **ICC**: not tested yet **IHC**: 1 : 200 **IHC-P/FFPE**: not tested yet
Label	Oyster 650
Clone	351C10
Subtype	IgG1 (κ light chain)
Immunogen	Recombinant protein corresponding to AA 3 to 251 from human CalbindinD28k (UniProt Id: P05937)
Epitop	Epitop: AA 3 to 251 from human CalbindinD28k (UniProt Id: P05937)
Reactivity	Reacts with: human (P05937), rat (P07171), mouse (P12658), zebrafish. Other species not tested yet.
Specificity	Specific for calbindin D28k.
matching control	214-0P

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Two isoforms of the vitamin D-dependent Ca-binding proteins have been described so far: **calbindin D28k**, also referred to as CALB 1, D-28k, and CAB 27, and calbindin D29k, also known as calretinin. These proteins are expressed in cells that have to handle a high calcium influx such as brain, bone, teeth, inner ear and others. Calbindins are believed to regulate cellular activity by suppressing or buffering intracellur calcium

Selected General References

Influence of the "open field" exposure on calbindin D28K, calretinin, and parvalbumin containing cells in the rat midbrain - developmental study.
Klejbor I, Ludkiewicz B, Domaradzka-Pytel B, Spodnik JH, Dziewiatkowski J, Moryś J
Journal of physiology and pharmacology : an official journal of the Polish Physiological Society (2006) 57(1): 149-64.

Calbindin D-28 and microtubule-associated protein-2: their use as sensitive immunohistochemical markers of cerebellar neurotoxicity in a regulatory toxicity study.
Haworth R, McCormack N, Selway S, Pilling AM, Williams TC
Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie (2006) 57(5-6): 419-26.

Mutational analysis of dendritic Ca2+ kinetics in rodent Purkinje cells: role of parvalbumin and calbindin D28k.
Schmidt H, Stiefel KM, Racay P, Schwaller B, Eilers J
The Journal of physiology (2003) 551(Pt 1): 13-32.

Calbindin in cerebellar Purkinje cells is a critical determinant of the precision of motor coordination.
Barski JJ, Hartmann J, Rose CR, Hoebeek F, Mörl K, Noll-Hussong M, De Zeeuw CI, Konnerth A, Meyer M
The Journal of neuroscience : the official journal of the Society for Neuroscience (2003) 23(8): 3469-77.

'New' functions for 'old' proteins: the role of the calcium-binding proteins calbindin D-28k, calretinin and parvalbumin, in cerebellar physiology. Studies with knockout mice.
Schwaller B, Meyer M, Schiffmann S
Cerebellum (London, England) (2002) 1(4): 241-58.

Synthesis of calbindin-D28K during mineralization in human bone marrow stromal cells.
Faucheux C, Bareille R, Amedee J
The Biochemical journal (1998) 333 (Pt 3): 817-23.

Calbindin-D in peripheral nerve cells is vitamin D and calcium dependent.
Lee YS, Taylor AN, Reimers TJ, Edelstein S, Fullmer CS, Wasserman RH
Proceedings of the National Academy of Sciences of the United States of America (1987) 84(20): 7344-8.