



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

Cat.No. 214 111; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

## Data Sheet

|                              |   |
|------------------------------|---|
| Reconstitution/ Storage      | 100 µg purified IgG, lyophilized. Azide was added before lyophilization. For reconstitution add 100 µl H <sub>2</sub> O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. |
| Applications                 | WB: 1 : 1000 (AP staining)<br>IP: yes<br>ICC: 1 : 500<br>IHC: 1 : 200 up to 1 : 1000<br>IHC-P/FFPE: 1 : 500   |
| Clone                        | 37C9  |
| Subtype                      | IgG1 (κ light chain)  |
| Immunogen                    | Recombinant protein corresponding to AA 1 to 271 from mouse Calretinin (UniProt Id: Q08331)   |
| Epitop                       | Epitop: AA 1 to 271 from mouse Calretinin (UniProt Id: Q08331)  |
| Reactivity                   | Reacts with: rat (P47728), mouse (Q08331), human (P22676), zebrafish. Other species not tested yet.   |
| Specificity matching control | Specific for calretinin / calbindin D29k.<br>214-1P   |

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

Two isoforms of the the vitamin D-dependent Ca-binding proteins have been described so far: **Calretinin**, also referred to as calbindin D29k, calbindin 2, CALB 2, CAL 2, and CAB 29, and calbindin D28k. 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 intracellular calcium.

## Selected References SYSY Antibodies

- Re-evaluation of neuronal P2X7 expression using novel mouse models and a P2X7-specific nanobody. Kaczmarek-Hajek K, Zhang J, Kopp R, Grosche A, Rissiek B, Saul A, Bruzzone S, Engel T, Jooss T, Krautloher A, Schuster S, et al. eLife (2018) 7.: IHC; tested species: mouse
- NCAM Regulates Inhibition and Excitability in Layer 2/3 Pyramidal Cells of Anterior Cingulate Cortex. Zhang X, Sullivan CS, Kratz MB, Kasten MR, Maness PF, Manis PB Frontiers in neural circuits (2017) 11: 19. IHC; tested species: mouse

## 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.
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- Mutational analysis of dendritic Ca<sup>2+</sup> kinetics in rodent Purkinje cells: role of parvalbumin and calbindin D28k. Schmidt H, Stieffel 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, Mört K, Noll-Hussong M, De Zeeuw Cl, 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. Faucheu 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.