

# Product Datasheet

## Calbindin D-28K Antibody (4H7) - BSA Free NBP2-50048

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NBP2-50048**

Calbindin D-28K Antibody (4H7) - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	4H7
Preservative	0.035% Sodium Azide
Isotype	IgG1
Purity	Immunogen affinity purified
Buffer	50% PBS, 50% glycerol
Target Molecular Weight	28 kDa
Product Description	
Host	Mouse
Gene ID	793
Gene Symbol	CALB1
Species	Human, Mouse, Rat, Porcine, Bovine
Immunogen	Full-length recombinant human Calbindin D-28K. [UniProt# P05937]
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunohistochemistry Free-Floating
Recommended Dilutions	Western Blot 1:1000-1:5000, Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:1000, Immunohistochemistry-Paraffin 1:1000, Immunohistochemistry Free-Floating 1:1000
Application Notes	Use in IHC-P reported in scientific literature (PMID: 29208685).

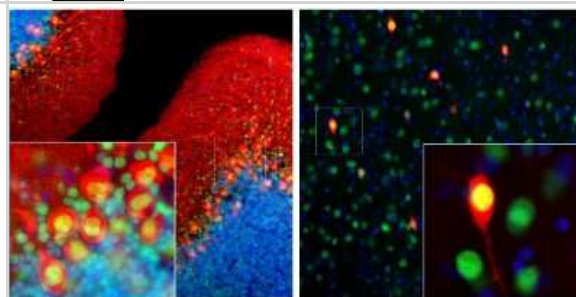


## Images

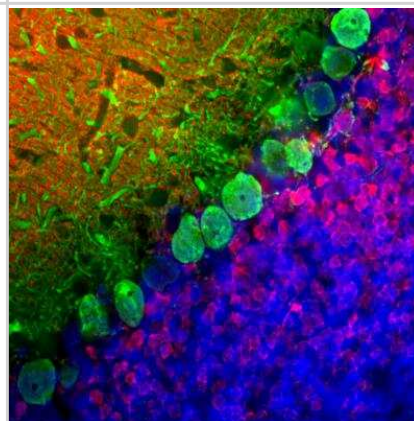
Western Blot: Calbindin D-28K Antibody (4H7) [NBP2-50048] - Analysis of cow cerebellum lysate were probed with NBP2-50048. NBP2-50048 binds strongly and specifically to Calbindin at 28 kDa.



Immunocytochemistry/Immunofluorescence: Calbindin D-28K Antibody (4H7) [NBP2-50048] - Rat brain cerebellum (Middle) and cortex (Right) sections (45  $\mu$ M; fixed by transcardial perfusion with 4% paraformaldehyde) were co-stained with NBP2-50048 (red) and anti-MeCP2 rabbit antibody (NBP2-50060, green). Calbindin is predominantly expressed in the dendrites and perikarya of Purkinje cells in the molecular layer of cerebellum, and selectively expressed in certain type of interneurons (calbindin-positive interneuron) in the cortex. MeCP2 is universally expressed in the nuclei of almost all neurons. As a result, calbindin-expressing cell is strongly labeled with red in soma, but the nucleus appears to be yellow. Blue is Dapi nucleus staining. Insets are high magnification images of the boxed areas.



Immunohistochemistry Free-Floating: Calbindin D-28K Antibody (4H7) [NBP2-50048] - Analysis of rat brain cerebellum section stained with mouse mAb to calbindin, NBP2-50048, dilution 1:1,000, in green, and costained with rabbit pAb to calretinin, dilution 1:5,000 in red. The blue is DAPI staining of nuclear DNA. Following transcardial perfusion with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45  $\mu$ M, and free-floating sections were stained with the above antibodies. Calbindin antibody prominently labels the dendrites and perikarya of Purkinje cells in the molecular layer of cerebellum. In contrast the calretinin antibody stains granule cells, in the granular layer, and their processes in the molecular layer.



## Publications

Singla R, Mishra A, Lin H et al. Haploinsufficiency of a Circadian Clock Gene Bmal1 (Arntl or Mop3) Causes Brain-Wide mTOR Hyperactivation and Autism-like Behavioral Phenotypes in Mice International journal of molecular sciences 2022-06-05 [PMID: 35682995]

Otterpohl KL, Hart RG, Evans C et al. Nonmuscle myosin 2 proteins encoded by Myh9, Myh10, and Myh14 are uniquely distributed in the tubular segments of murine kidney Physiological Reports 2017-12-05 [PMID: 29208685] (IHC-P, Mouse)



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### **Products Related to NBP2-50048**

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)
NBP1-30222	Recombinant Human Calbindin D-28K Protein

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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