Product Datasheet

Calbindin D-28K Antibody NBP2-50028

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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NBP2-50028

Calbindin D-28K Antibody

Product Information	
Unit Size	0.1 ml
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.035% Sodium Azide
Isotype	IgY
Purity	IgY purified
Buffer	Supplied as an aliquot of IgY preparation
Target Molecular Weight	28 kDa
Product Description	
Host	Chicken
Gene ID	793
Gene Symbol	CALB1
Species	Human, Mouse, Rat, Bovine
Reactivity Notes	Mouse reported from a verifed customer review.
Immunogen	Full-length recombinant human Calbindin D-28K. [UniProt# P05937]
Notes	Chicken products cannot be exported to Canada.
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 - 1:5000, Immunocytochemistry/ Immunofluorescence 1:1000 - 1:5000, Immunohistochemistry-Paraffin, Immunohistochemistry Free-Floating
Application Notes	In Western blot, this antibody recognizes a clear band at ~28 kDa in rat brain lysates which represents Calbindin and it reacts only with Calbindin protein, and not other calcium-binding proteins. A band maybe seen at ~60 kDa and is most likely the dimer of Calbindin. ICC/IF reported from a verified customer review. Use in Immunohistochemistry-paraffin reported in scientific literature (PMID: 29208685).

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Western Blot: Calbindin D-28K Antibody [NBP2-50028] - Analysis of different tissue lysates and recombinant protein solutions using chicken pAb to calbindin, NBP2-50028, dilution 1:5,000 in green: [1] protein standard (red), [2] rat cerebellum, [3] pig hippocampus, [4] cow cerebellum, [5] protein standard (red). Next lanes are full length recombinant human proteins, [6] Parvalbumin, [7] Calretinin, [8] Calbindin. Bands at 25kDa in tissue lysates and ~30 kDa in protein solutions correspond to calbindin, the recombinant form being slightly larger due to the presence of a His tag and other vector derived sequence. NBP2-50028 antibody specifically recognizes calbindin protein and does not react with the closely related proteins parvalbumin and calretinin.

Immunocytochemistry/Immunofluorescence: Calbindin D-28K Antibody [NBP2-50028] - Cultured mouse embryonic kidney stained with Calbindin antibody (1:200) and DAPI. Image from verified customer review.

Immunohistochemistry: Calbindin D-28K Antibody [NBP2-50028] -Representative images of horizontal cells (Calbindin D-28K, cyan) in wild type control and C1q-/- mice at P8, P13, P17, and P23. Horizontal cells in C1q-/- mice fail to remain confined to the OPL, showing an increased number of ectopic neurites (arrowheads) that peak at P13 but remain present as development proceeds. These neurites extend into the outer nuclear layer and grow longer over time. Scale bars = 25 um. Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/33177995/) licensed under a CC-BY license.

Western Blot: Calbindin D-28K Antibody [NBP2-50028] - Analysis of rat brain lysate (left), 0.5 ug of His-tagged recombinant proteins (right) were probed with NBP2-50028 at 1:5,000. Lane 1: Parvalbumin, Lane 2: Calretinin, Lane 3: Calbindin.











Immunocytochemistry/Immunofluorescence: Calbindin D-28K Antibody [NBP2-50028] - Adult rat brain cortex (Left) and striatum (Right) sections (45 uM; fixed by transcardial perfusion with 4% paraformaldehyde) were stained with NBP2-50028 (1:1,000, red), and monoclonal mouse anti-RBFOX3/NeuN (NBP1-92693; green). Calbindin labels a subset of sparsely-distributed interneurons (calbindin-positive interneurons) in the cortex (Left), and more densely-distributed neurons in the striatum (Right). Since neurons also express RBFOX3/NeuN, calbindin-positive cells appear to be gold to yellow. Insets are high magnification images of boxed area of each image. Blue is Dapi nucleus staining.



Immunohistochemistry Free-Floating: Calbindin D-28K Antibody [NBP2-50028] - Analysis of rat cerebellum section stained with chicken Calbindin D-28K pAb, dilution 1:2,000 (Green), and costained with rabbit MeCP2 pAb, dilution 1:5,000 (Red). Following transcardial perfusion with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45uM, and free-floating sections were stained with above antibodies. Calbindin D-28K, often used as a Purkinje cell marker, is prominently detected in dendrites and perikarya of these cells in the cerebellar molecular layer. The MeCP2 antibody selectively stains nuclei of neuronal cells.





Publications

Matthias Ollivier, Joselyn S. Soto, Kay E. Linker, Stefanie L. Moye, Yasaman Jami-Alahmadi, Anthony E. Jones, Ajit S. Divakaruni, Riki Kawaguchi, James A. Wohlschlegel, Baljit S. Khakh Crym -positive striatal astrocytes gate perseverative behaviour Nature 2024-02-28 [PMID: 38418885]

KL Otterpohl, BW Busselman, I Ratnayake, RG Hart, K Hart, C Evans, CL Phillips, JR Beach, P Ahrenkiel, B Molitoris, K Surendran, I Chandrasek Conditional Myh9 and Myh10 inactivation in adult mouse renal epithelium results in progressive kidney disease JCI Insight, 2020-11-05;0(0):. 2020-11-05 [PMID: 33001861]

Chen TI, Hsu PC, Lee NC et al. Loss of Flot2 expression in deep cerebellar nuclei neurons of mice with Niemann-Pick disease type C Heliyon 2023-07-01 [PMID: 37539272] (IHC-Fr, Mouse)

Details:

1:1000 dilution

Jiang D, Burger CA, Akhanov V et al. Neuronal signal-regulatory protein alpha drives microglial phagocytosis by limiting microglial interaction with CD47 in the retina Immunity 2022-11-09 [PMID: 36379210] (IHC-Fr, Mouse)

Romano LEL, Aw WY, Hixson KM et al. Multi-omic profiling reveals the ataxia protein sacsin is required for integrin trafficking and synaptic organization Cell reports 2022-11-01 [PMID: 36323248]

Kwon KM, Pak JH, Jeon CJ Immunocytochemical localization of the AMPA glutamate receptor subtype GluR2/3 in the squid optic lobe Acta histochemica 2022-08-10 [PMID: 35963117] (IF/IHC)

Details:

Pacific flying squids (Tordarodes pacificus), dilution used for IHC 1:500

Liang JH, Alevy J, Akhanov V et al. Kctd7 deficiency induces myoclonic seizures associated with Purkinje cell death and microvascular defects Disease models & mechanisms 2022-08-16 [PMID: 35972048] (IHC-P, Mouse)

Veerakumar A, Yung AR, Liu Y, Krasnow MA Molecularly defined circuits for cardiovascular and cardiopulmonary control Nature 2022-06-01 [PMID: 35650438] (IF/IHC, Mouse)

Garcia H, Serafin AS, Silbermann F et al. Agonists of prostaglandin E2 receptors as potential first in class treatment for nephronophthisis and related ciliopathies Proceedings of the National Academy of Sciences of the United States of America 2022-05-03 [PMID: 35482924] (IF/IHC, Mouse)

Burger, C A, Jiang, D Et al. C1q Regulates Horizontal Cell Neurite Confinement in the Outer Retina. Front Neural Circuits 2020-11-13 [PMID: 33177995] (IHC-Fr, ICC/IF, Rat)

D'Souza SP, Swygart DI, Wienbar SR Et al. Retinal patterns and the cellular repertoire of neuropsin (Opn5) retinal ganglion cells The Journal of comparative neurology 2021-11-07 [PMID: 34743323] (IHC-WhMt, Mouse)

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] (IF/IHC, IF/IHC, Mouse)

More publications at <u>http://www.novusbio.com/NBP2-50028</u>

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Products Related to NBP2-50028

DBD00	BDNF [HRP]
NBP1-30222	Recombinant Human Calbindin D-28K Protein
NB7276	Goat anti-Chicken IgM Heavy Chain Secondary Antibody
BAF010	Goat anti-Chicken IgY Secondary Antibody [Biotin]

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