Product Datasheet

Cav3.2 Antibody (S55/10) - BSA Free
NBP1-22444

Unit Size: 0.1 mg

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

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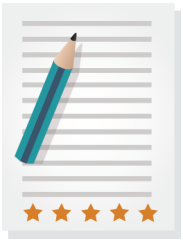
Updated 9/9/2025 v.20.1



NBP1-22444

Cav3.2 Antibody (S55/10) - BSA Free

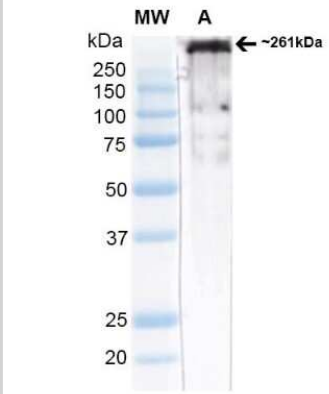
Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	S55/10
Preservative	0.09% Sodium Azide
Isotype	IgG1
Purity	Protein G purified
Buffer	PBS (pH 7.4), 50% Glycerol

Product Description	
Description	Novus Biologicals Mouse Cav3.2 Antibody (S55/10) - BSA Free (NBP1-22444) is a monoclonal antibody validated for use in IHC, WB, ICC/IF and IP. Anti-Cav3.2 Antibody: Cited in 10 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	8912
Gene Symbol	CACNA1H
Species	Human, Mouse, Rat
Specificity/Sensitivity	Detects approx 260 kDa. No cross-reactivity against Cav1.3.
Immunogen	Fusion protein amino acids 1019-1293 (II-III loop) of human Cav3.2

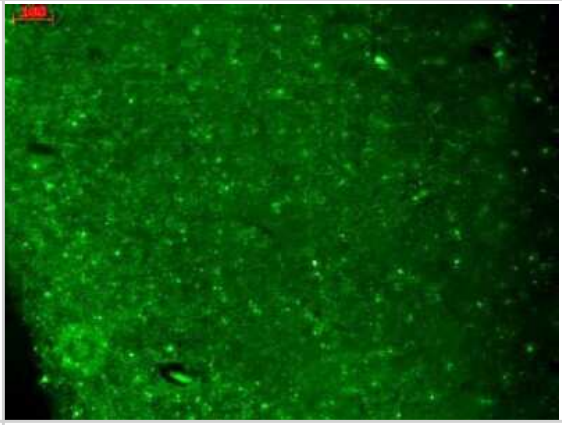
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation, Microarray
Recommended Dilutions	Western Blot 1:1000, Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:100, Immunoprecipitation, Immunohistochemistry-Paraffin 1:10-1:500, Immunohistochemistry-Frozen 1:10-1:500, Microarray
Application Notes	1 ug/ml of Cav3.2 Antibody was sufficient for detection of Cav3.2 in 10 ug of HEK cell lysate expressing Cav3.2 by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary Antibody.

Images

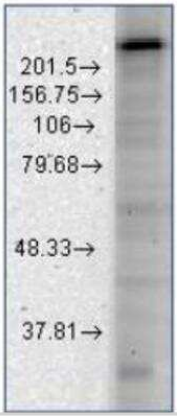
Western Blot: Cav3.2 Antibody (S55/10) [NBP1-22444] - Western Blot analysis of Rat brain membrane lysate (native) showing detection of ~261 kDa Cav3.2protein using Mouse Anti-Cav3.2Monoclonal Antibody, Clone N55/10 (NBP1-22444). Block: 2% Skim Milk + 2% BSA in TBST. Primary Antibody: Mouse Anti-Cav3.2Monoclonal Antibody (NBP1-22444) at 1:1000 for 2 hours at RT. Secondary Antibody: Anti-Mouse: HRP at 1:4000. Predicted/Observed Size: ~261 kDa.



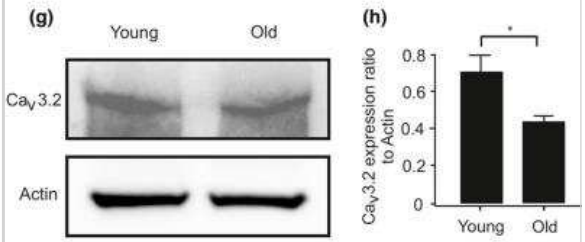
Immunohistochemistry-Paraffin: Cav3.2 Antibody (S55/10) [NBP1-22444] - Tissue: hippocampus. Species: Human. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-CaV3.2 Calcium Channel Monoclonal Antibody at 1:1000 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



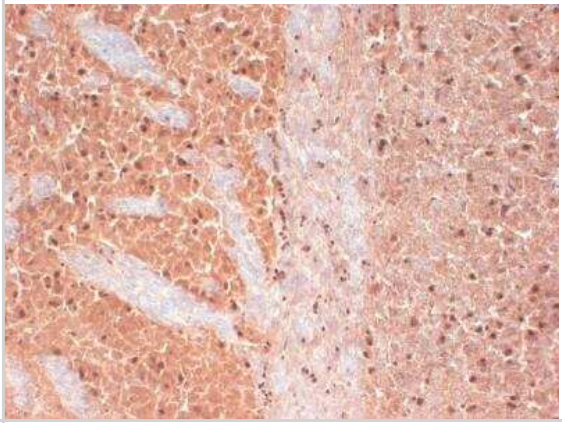
Western Blot: Cav3.2 Antibody (S55/10) [NBP1-22444] - Western Blot using rat brain membranes and NBP1-22444 to target Cav3.2 channels visible at about 260 kDa.



Western Blot: Cav3.2 Antibody (S55/10) [NBP1-22444] - Western blot analysis of CaV3.2 proteins in mesenteric arteries of young versus old mice. (h), quantification of Western blot results. Mesenteric arteries were taken from 9 mice in each group. *, p < .05. Image collected and cropped by CiteAb from the following publication (onlinelibrary.wiley.com/doi/abs/10.1111/acel.13134) licensed under a CC-BY license.



Immunohistochemistry-Frozen: Cav3.2 Antibody (S55/10) [NBP1-22444] - Tissue: frozen brain section. Species: human. Fixation: 10% Formalin Solution for 12-24 hours at RT. Primary Antibody: Mouse Anti-CaV3.2 Calcium channel Monoclonal Antibody at 1:1000 for 1 hour at RT. Secondary Antibody: HRP/DAB Detection System: Biotinylated Goat Anti-Mouse, Streptavidin Peroxidase, DAB Chromogen (brown) for 30 minutes at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 250-500 uL for 5 minutes at RT.



Western Blot: Cav3.2 Antibody (S55/10) [NBP1-22444] - Age attenuates the role of CaV3.2 channels in Ca2+ spark generation & decreases CaV3.2 protein expression in VSMC. (a), Ca2+ fluorescence images of a Fluo□4□AM–loaded VSMC from a young mouse & time course of Ca2+ fluorescence changes in the cellular ROI (upper panel). Cell boundary is marked with dashed line. (b), same as (a) but in the presence of Ni2+ (50 μM). (c), same as (a) but in a VSMC from an old mouse. (d), same as (c) but in the presence of Ni2+ (50 μM). (e, f), summary of the results. Ca2+ spark frequency (e) & fraction of cells producing Ca2+ sparks (f) in VSMCs from young mice (n = 102), in VSMCs from young mice cells incubated with Ni2+ (n = 85), in VSMCs from aged mice (n = 129), & in VSMCs from aged mice cells incubated with Ni2+ (n = 127). Cells were isolated from 4 mice in each group; 25–40 cells were recorded & analyzed from each mouse. VSMC, vascular smooth muscle cell. (g), Western blot analysis of CaV3.2 proteins in mesenteric arteries of young versus old mice. (h), quantification of Western blot results. Mesenteric arteries were taken from 9 mice in each group. *, p < .05. n.s., not significant Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32187825), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Publications

Cai H, Chen S, Sun Y et al. Interleukin-22 receptor 1-mediated stimulation of T-type Ca 2+ channels enhances sensory neuronal excitability through the tyrosine-protein kinase Lyn-dependent PKA pathway. Cell communication and signaling : CCS 2024-06-04 [PMID: 38831315]

Gandini MA, Souza IA, Khullar A Et al. Regulation of CaV3.2 channels by the receptor for activated C kinase 1 (Rack-1) Pflugers Archiv : European journal of physiology 2021-10-08 [PMID: 34623515] (WB)

Zhang Y, Qian Z, Jiang D Et al. Neuromedin B receptor stimulation of Cav3.2 T-type Ca2+ channels in primary sensory neurons mediates peripheral pain hypersensitivity Theranostics 2021-09-09 [PMID: 34646374] (WB, Mouse)

Fan G, Kamann M, Cui Y et Al. Age attenuates the T-type CaV 3.2-RyR axis in vascular smooth muscle Aging Cell 2020-03-18 [PMID: 32187825] (WB, Mouse)

Wang H, Wei Y, Pu Y et al. Brain-derived neurotrophic factor stimulation of T-type Ca2+ channels in sensory neurons contributes to increased peripheral pain sensitivity Sci Signal 2019-09-24 [PMID: 31551295] (WB, Rat)

Hashad AM, Harraz OF, Brett SE. Caveolae Link CaV3.2 Channels to BKCa-Mediated Feedback in Vascular Smooth Muscle Vascular Biology [PMID: 30354206] (WB)

Garcia-Caballero A, Gandini MA, Huang S et al. Cav3.2 calcium channel interactions with the epithelial sodium channel ENaC Mol Brain 2019-02-08 [PMID: 30736831] (WB, Mouse)

Garcia-Caballero A, Zhang FX, Hodgkinson V et al. T-type calcium channels functionally interact with spectrin (a/B) and ankyrin B Mol Brain 2018-05-02 [PMID: 29720258] (ICC/IF)

Stemkowski P, Garcia-Caballero A, Gadotti VM et al. TRPV1 Nociceptor Activity Initiates USP5/T-type Channel-Mediated Plasticity. Cell Rep. 2016-12-13 [PMID: 27974205] (Mouse)

Garcia-Caballero A, Gadotti VM, Stemkowski P et al. The Deubiquitinating Enzyme USP5 Modulates Neuropathic and Inflammatory Pain by Enhancing Cav3.2 Channel Activity. Neuron. 2014-09-03 [PMID: 25189210] (WB, IP, Mouse)

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NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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