Product Datasheet

PSD-95 Antibody (6G6-1C9) - BSA Free

NB300-556-0.025ml

Unit Size: 0.025 ml

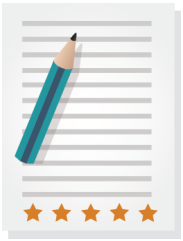
Store at -20C. Avoid freeze-thaw cycles.

www.novusbio.com technical@novusbio.com

Reviews: 1 Publications: 31

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB300-556

Updated 10/23/2024 v.20.1



NB300-556-0.025ml

PSD-95 Antibody (6G6-1C9) - BSA Free

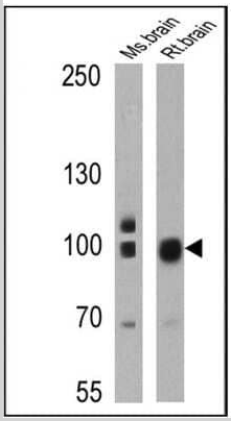
Product Information	
Unit Size	0.025 ml
Concentration	3.3 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	6G6-1C9
Preservative	0.05% Sodium Azide
Isotype	IgG2a
Purity	Protein A purified
Buffer	PBS

Product Description	
Host	Mouse
Gene ID	1742
Gene Symbol	DLG4
Species	Human, Mouse, Rat, Invertebrate, Primate
Reactivity Notes	Invertebrate reactivity reported in scientific literature (PMID: 18182049). Primate reactivity reported in scientific literature (PMID: 20519524). Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information.
Marker	post-Synaptic Marker
Specificity/Sensitivity	Detects Post Synaptic Density 95 kDa (PSD-95) from rat tissues.
Immunogen	Purified recombinant rat PSD-95.

Product Application Details	
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Block/Neutralize, Chromatin Immunoprecipitation (ChIP)
Recommended Dilutions	Western Blot 1:2000, Flow Cytometry 2 ug / test (100ul), Immunohistochemistry 1:10 - 1:500, Immunocytochemistry/ Immunofluorescence 1:100 - 1:2000, Immunoprecipitation 1:10 - 1:500, Immunohistochemistry-Paraffin 1:10 - 1:500, Immunohistochemistry-Frozen 1:10 - 1:500, Chromatin Immunoprecipitation (ChIP) 1:10-1:500, Block/Neutralize
Application Notes	WB: Detects an approx. 95 kDa protein and a slightly larger band in rat brain extracts. Flow usage was reported in scientific literature (PMID: 19187438). IHC usage was reported in scientific literature (PMID: 21289286). IHC-Fr usage was reported in scientific literature (PMID: 24875483).

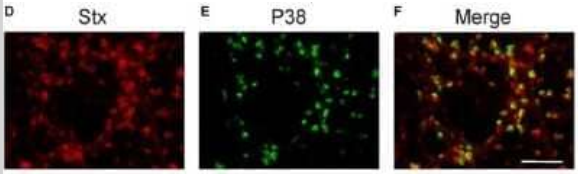
Images

Western Blot: PSD-95 Antibody (6G6-1C9) [NB300-556] - Analysis of 25 ug of mouse brain (lane 1) and rat brain (lane 2) cell lysates.

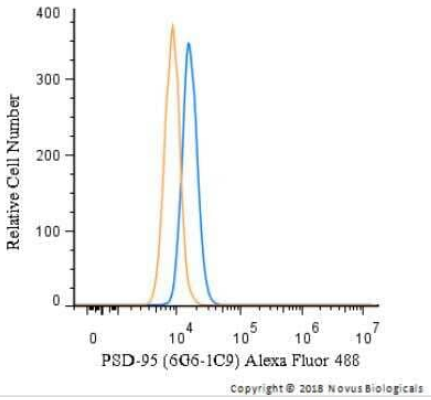


Immunocytochemistry/Immunofluorescence: PSD-95 Antibody (6G6-1C9) [NB300-556] - Control immunolocalization of plasma membrane AMPA receptor subunits (external epitopes) in hippocampal neuronal cultures. H) Immunolabeling of non-permeabilized neuronal cultures with ani-GluA1 (green). (I) Immunolabeling with the postsynaptic marker anti-PSD95 [66] after permeabilization of neuronal cultures. (J) Merging of (H) and (I) showing postsynaptic labeling of GluA1. Scale bar (valid for all images): 10 um. Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0140868), licensed under a CC-BY license.

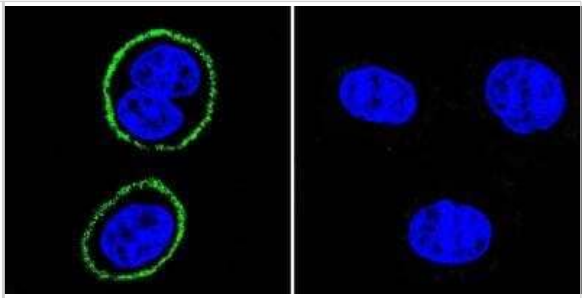
Immunohistochemistry-Paraffin: PSD-95 Antibody (6G6-1C9) [NB300-556] - Confocal images of dissociated hippocampal cultures. Double labeling with anti-syntaxin-1 Double labeling with antibodies against syntaxin-1 (D) and synaptophysin (E) indicates that syntaxin-1 is colocalized with presynaptic marker (F). Image collected and cropped by CiteAb from the following publication (https://journal.frontiersin.org/Article/10.3389/fnmol.2016.00010/abstract), licensed under a CC-BY license.



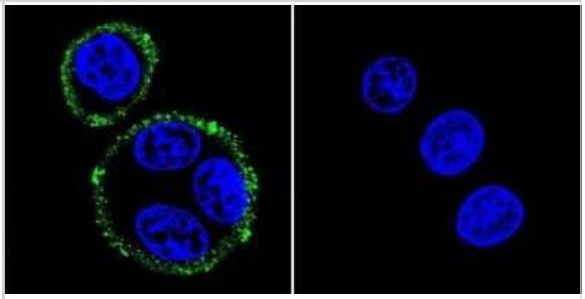
Flow Cytometry: PSD-95 Antibody (6G6-1C9) [NB300-556] - An intracellular stain was performed on HeLa cells with PSD-95 Antibody (6G6-1C9) NB300-556AF488 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 488.



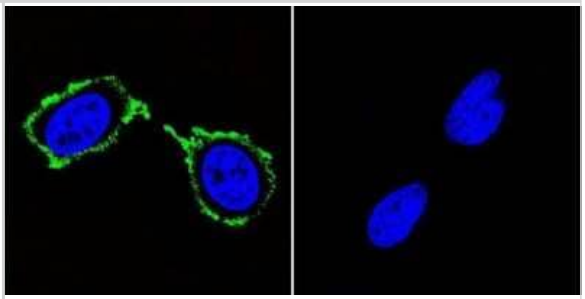
Immunocytochemistry/Immunofluorescence: PSD-95 Antibody (6G6-1C9) [NB300-556] - Analysis of PSD95 using PSD95 Monoclonal antibody (6G6-1C9) shows staining in HeLa cells. PSD95 staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing PSD95 at a dilution of 1:100-1:200 over night at 4C, washed with PBS and incubated with a DyLight-488 conjugated.



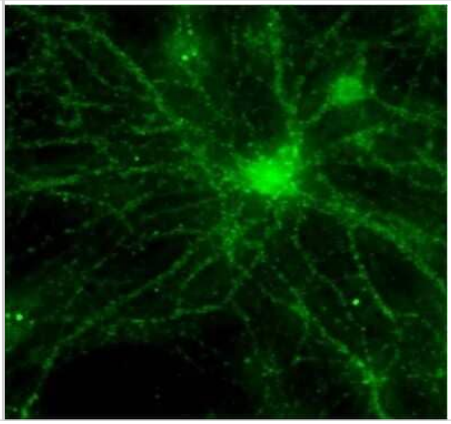
Immunocytochemistry/Immunofluorescence: PSD-95 Antibody (6G6-1C9) [NB300-556] - Analysis of PSD95 using PSD95 Monoclonal antibody (6G6-1C9) shows staining in U251 glioma cells. PSD95 staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing PSD95 at a dilution of 1:100-1:200 over night at 4C, washed with PBS and incubated with a DyLight-488 conjugated.



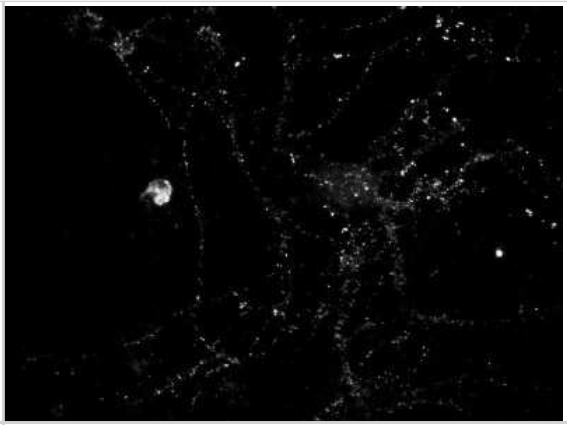
Immunocytochemistry/Immunofluorescence: PSD-95 Antibody (6G6-1C9) [NB300-556] - Analysis of PSD95 using PSD95 Monoclonal antibody (6G6-1C9) shows staining in C6 glioma cells. PSD95 staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing PSD95 at a dilution of 1:100-1:200 over night at 4C, washed with PBS and incubated with a DyLight-488 conjugated.



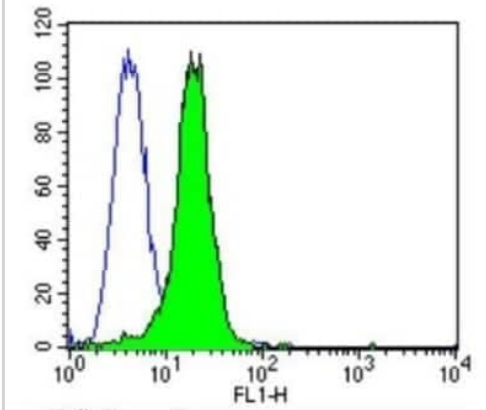
Immunocytochemistry/Immunofluorescence: PSD-95 Antibody (6G6-1C9) [NB300-556] - Analysis of Post Synaptic Density 95kD protein (PSD95, green) in cultured primary cortical neurons. Primary cortical neurons are isolated and cultured using the Primary Neuron Isolation Kit. At day 28, neurons were fixed with 4% paraformaldehyde, permeablilized with 0.1% triton X-100 in HBSS for 10 minutes at room temperature, and blocked with 3% BSA in PBS for 30 minutes at room temperature. Cells were probed with a PSD95 monoclonal antibody at a dilution of 1:500 for 2 hours at room temperature or overnight at 4C, washed with HBSS, and incubated with DyLight 488 goat anti-mouse IgG secondary antibody at dilution of 1:500 for 1 hour at room temperature.



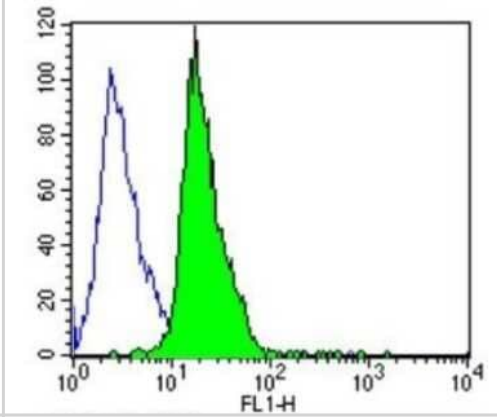
Immunocytochemistry/Immunofluorescence: PSD-95 Antibody (6G6-1C9) [NB300-556] - Mixed 3 week old rat cortical cultures (21 DIV) were labelled with anti-PSD95 (1:650) and visualised with anti-mouse Alexa647 (1:2000). The antibody labels small punctae along neuronal processes as expected. This image was submitted via customer Review.



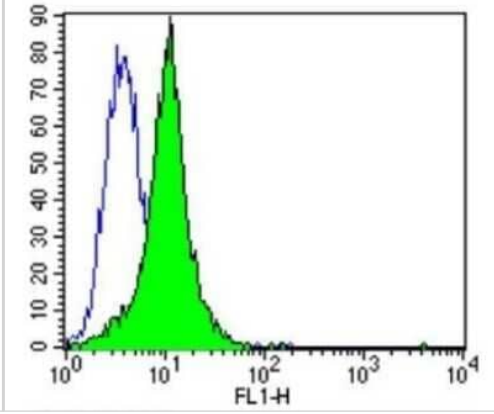
Flow Cytometry: PSD-95 Antibody (6G6-1C9) [NB300-556] - Analysis of PSD95 in Neuro-2a cells compared to an isotype control (blue).

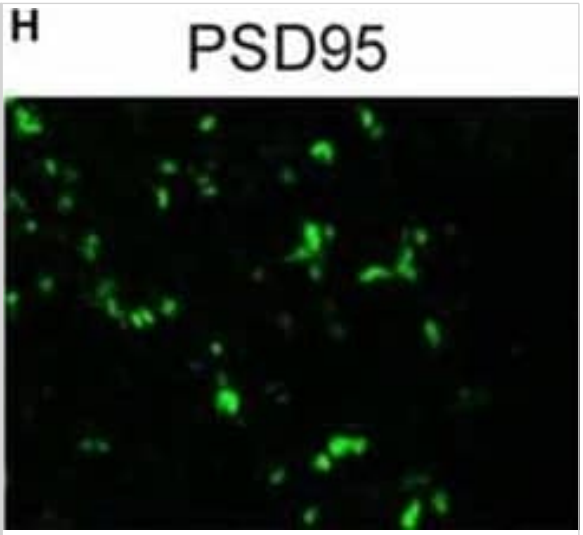
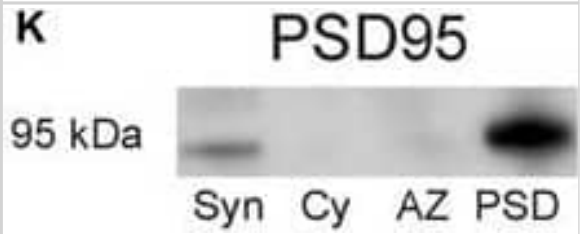
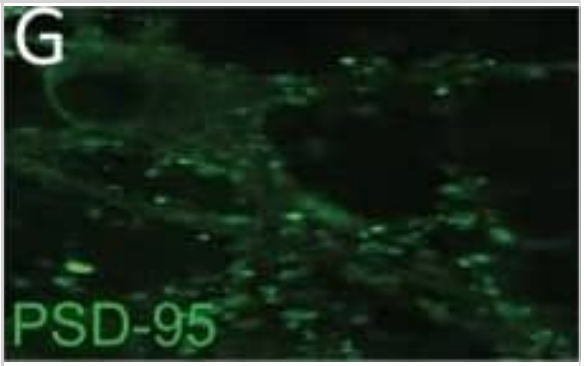


Flow Cytometry: PSD-95 Antibody (6G6-1C9) [NB300-556] - Analysis of PSD95 in SH-SY5Y cells compared to an isotype control (blue).

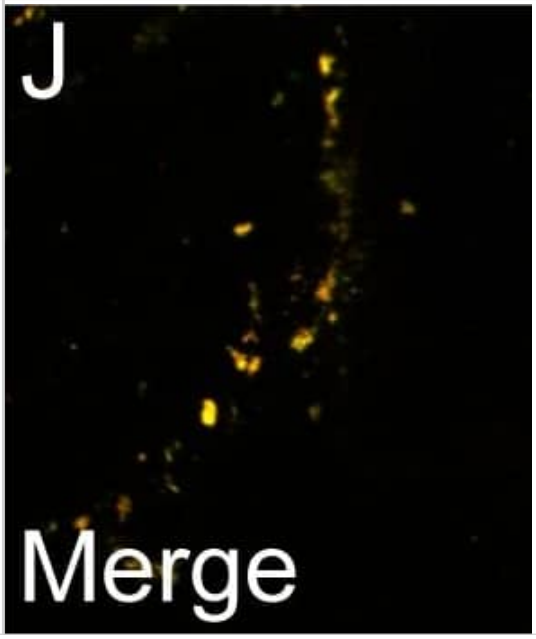


Flow Cytometry: PSD-95 Antibody (6G6-1C9) [NB300-556] - Analysis of PSD95 in U87-MG cells compared to an isotype control (blue).



Immunocytochemistry/ Immunofluorescence: PSD-95 Antibody (6G6-1C9) - BSA Free [NB300-556] - Confocal images of dissociated hippocampal cultures. Double labeling with anti-syntaxin-1 (A) & anti-Tuj1 (B) demonstrates that syntaxin-1 is located along the dendrites & gives characteristic punctate labeling (C). Double labeling with antibodies against syntaxin-1 (D) & synaptophysin (E) indicates that syntaxin-1 is colocalized with presynaptic marker (F). Double labeling for syntaxin-1 (G) & PSD-95 (H) shows partial colocalization postsynaptic (I). Scale bars: 10 µm. (J–L) Western blot analysis of synaptosomes (Syn), synaptic cytosolic fraction (Cy), active zone (AZ) & post synaptic density (PSD). Labeled with anti-synaptophysin (J) anti-PSD95 (K) & anti-syntaxin-1 (L). Image collected & cropped by CiteAb from the following publication (http://journal.frontiersin.org/Article/10.3389/fnmol.2016.00010/abstract), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Western Blot: PSD-95 Antibody (6G6-1C9) - BSA Free [NB300-556] - Confocal images of dissociated hippocampal cultures. Double labeling with anti-syntaxin-1 (A) & anti-Tuj1 (B) demonstrates that syntaxin-1 is located along the dendrites & gives characteristic punctate labeling (C). Double labeling with antibodies against syntaxin-1 (D) & synaptophysin (E) indicates that syntaxin-1 is colocalized with presynaptic marker (F). Double labeling for syntaxin-1 (G) & PSD-95 (H) shows partial colocalization postsynaptic (I). Scale bars: 10 µm. (J–L) Western blot analysis of synaptosomes (Syn), synaptic cytosolic fraction (Cy), active zone (AZ) & post synaptic density (PSD). Labeled with anti-synaptophysin (J) anti-PSD95 (K) & anti-syntaxin-1 (L). Image collected & cropped by CiteAb from the following publication (http://journal.frontiersin.org/Article/10.3389/fnmol.2016.00010/abstract), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunocytochemistry/ Immunofluorescence: PSD-95 Antibody (6G6-1C9) - BSA Free [NB300-556] - Confocal images of dissociated hippocampal cultures.Double labeling with anti-TUJ1 (A) & anti-VAMP2 (B) demonstrates that VAMP2 is located along the dendrites & gives characteristic punctate labeling (C). Double labeling with antibodies against synaptophysin (P38) (D) & VAMP2 (E) indicates that VAMP2 is colocalized with the presynaptic marker (F). Double labeling for PSD-95 (G) & VAMP2 (H) shows partial colocalization postsynaptic (I). Small, high-resolution pictures of single synapses from (F) & (I) are shown in the right part of these images, respectively. Scale bar: 20 µm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/26488171), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Immunocytochemistry/ Immunofluorescence: PSD-95 Antibody (6G6-1C9) - BSA Free [NB300-556] - Control immunolocalization of plasma membrane AMPA receptor subunits (external epitopes) in hippocampal neuronal cultures.(A) Beta-tubulin (green, anti-TuJ1) labeling of dendrite, after anti-GluA1 external epitope [66] labeling & subsequent plasma membrane permeabilization. Note punctate GluA1 [66] labeling along the dendrite. (B) Synaptophysin (P38, green) & GluA1 [66]. (C) Synaptophysin (green) & GluA2 [66]. (D) Labeling with anti-GluA1. (E) Labeling with anti-GluA1, but the antibody was preincubated with the peptide antigen before staining. (F) Labeling with anti-GluA2. (G) Labeling with anti-GluA2, but the antibody was preincubated with the peptide antigen before staining. (H) Immunolabeling of non-permeabilized neuronal cultures with ani-GluA1 (green). (I) Immunolabeling with the postsynaptic marker anti-PSD95 [66] after permeabilization of neuronal cultures. (J) Merging of (H) & (I) showing postsynaptic labeling of GluA1. Scale bar (in A, valid for all images): 10 µm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/26488171), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Jun Noguchi, Satoshi Watanabe, Tomofumi Oga, Risa Isoda, Keiko Nakagaki, Kazuhisa Sakai, Kayo Sumida, Kohei Hoshino, Koichi Saito, Izuru Miyawaki, Eriko Sugano, Hiroshi Tomita, Hiroaki Mizukami, Akiya Watakabe, Tetsuo Yamamori, Noritaka Ichinohe Altered projection-specific synaptic remodeling and its modification by oxytocin in an idiopathic autism marmoset model Communications Biology 2024-05-27 [PMID: 38802535]

Muangsanit P, Chailangkarn T, Tanwattana N et al. Hydrogel-based 3D human iPSC-derived neuronal culture for the study of rabies virus infection Frontiers in Cellular and Infection Microbiology 2023-08-25 [PMID: 37692167] (Immunocytochemistry/ Immunofluorescence)

Diaz A, Torre E, Yepes M. Preparation of Synaptoneurosomes to Study the Synapse in the Murine Cerebral Cortex BIO-PROTOCOL 2021-01-20 [PMID: 33732785] (Block/Neutralize)

Zhang N, Zhang Z, He R et al. GLAST-CreER(T2) mediated deletion of GDNF increases brain damage and exacerbates long-term stroke outcomes after focal ischemic stroke in mouse model Glia 2020-06-04 [PMID: 32497340]

Scaduto P, Lauterborn JC, Cox CD et al. Functional excitatory to inhibitory synaptic imbalance and loss of cognitive performance in people with Alzheimer's disease neuropathologic change Acta neuropathologica 2022-12-20 [PMID: 36538112] (FLOW, Human)

Details:
Dilution used in flow 1:80

Kumar S, Orlov E, Gowda P et al. Synaptosome microRNAs regulate synapse functions in Alzheimer's disease NPJ genomic medicine 2022-08-08 [PMID: 35941185] (WB, Mouse)

O'grady BJ, Balotin KM, Bosworth AM et al. Development of an N-Cadherin Biofunctionalized Hydrogel to Support the Formation of Synaptically Connected Neural Networks BioRxiv ACS Biomater Sci Eng 2020-12-15 [PMID: 33320550]

Zarate N, Intihar T, Yu D Et al. Heat Shock Factor 1 Directly Regulates Postsynaptic Scaffolding PSD-95 in Aging and Huntington’s Disease and Influences Striatal Synaptic Density preprints 2021-11-04 [PMID: 34884918] (WB, Mouse)

Ma KG, Hu HB, Zhou JS Et al. Neuronal Glypican4 promotes mossy fiber sprouting through the mTOR pathway after pilocarpine-induced status epilepticus in mice Experimental neurology 2021-11-05 [PMID: 34748756] (WB, Mouse)

Bieler M, Hussain S, Daaland ESB et al. Changes in concentrations of NMDA receptor subunit GluN2B, Arc and syntaxin-1 in dorsal hippocampus Schaffer collateral synapses in a rat learned helplessness model of depression The Journal of comparative neurology 2021-04-12 [PMID: 33843051]

Diaz A, Merino P, McCann P et al. Urokinase-type plasminogen activator promotes N-cadherin-mediated synaptic recovery in the ischemic brain Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism 2021-03-24 [PMID: 33757316]

Sulistomo HW, Nemoto T, Kage Y et al. Fhod3 Controls the Dendritic Spine Morphology of Specific Subpopulations of Pyramidal Neurons in the Mouse Cerebral Cortex Cerebral cortex (New York, N.Y. : 1991) 2020-11-30 [PMID: 33251537]

More publications at http://www.novusbio.com/NB300-556

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB300-556

Earn gift cards/discounts by submitting a publication using this product: www.novusbio.com/publications