Product Datasheet

GAP-43 Antibody
NB300-143SS

Unit Size: 0.025 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

Reviews: 1 Publications: 25

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NB300-143SS

GAP-43 Antibody

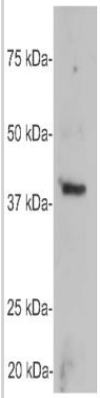
Product Information	
Unit Size	0.025 ml
Concentration	1 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	43 kDa

Product Description	
Host	Rabbit
Gene ID	2596
Gene Symbol	GAP43
Species	Human, Mouse, Rat, Chicken, Primate
Marker	Neuronal Marker
Immunogen	C-terminal peptide of rat and mouse GAP43, which is KEDPEADQEHA, with an N-terminal Cys added to allow chemical coupling to KLH carrier protein.

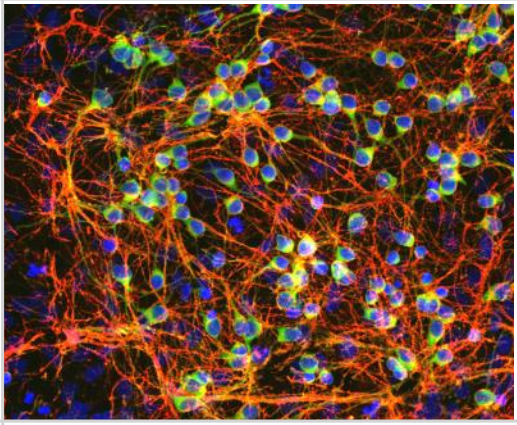
Product Application Details	
Applications	Western Blot, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Immunocytochemistry/Immunofluorescence 1:1000, Immunohistochemistry 1-2 ug/ml, Immunohistochemistry-Frozen 1-2 ug/ml, Immunohistochemistry-Paraffin 1-2 ug/ml, Western Blot 1:10000
Application Notes	This GAP43 antibody is useful for Immunocytochemistry/Immunofluorescence, Immunohistochemistry on paraffin-embedded and frozen sections and Western blot, where it recognizes a band at 43 kDa.

Images

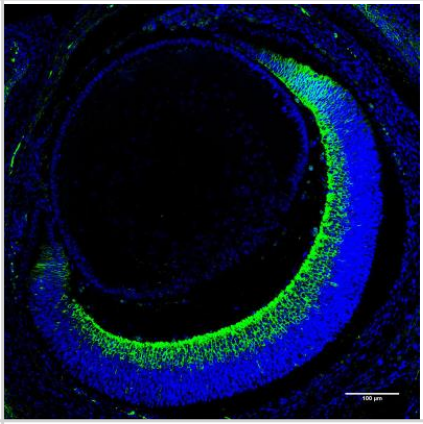
Western Blot: GAP43 Antibody [NB300-143] - Western blots of homogenate of cow cerebellum stained with RPCA-GAP43 . A prominent band running at ~43kDa represents the full length GAP43.



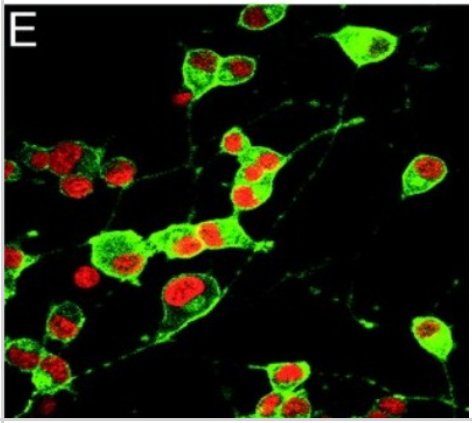
Immunocytochemistry/Immunofluorescence: GAP43 Antibody [NB300-143] - Rat E18 mixed neuron/glia cultures with rabbit GAP43 (red) and 5B10, mouse monoclonal to MAP-tau (green).



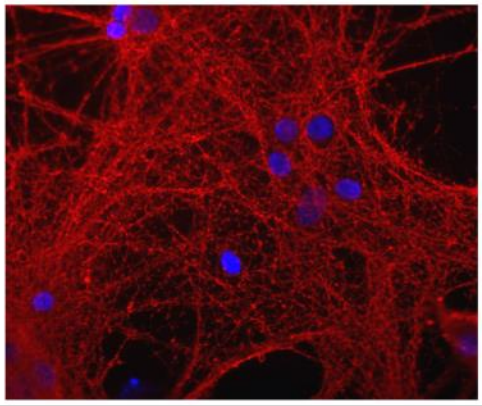
Immunohistochemistry-Paraffin: GAP43 Antibody [NB300-143] - Review image from confirmed customer on mouse E15.5 paraffin sections.



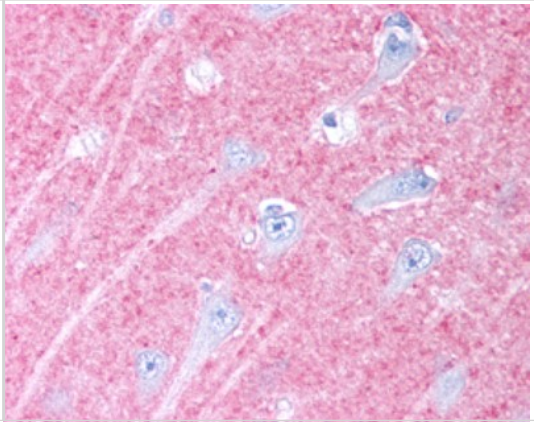
Immunocytochemistry/Immunofluorescence: GAP43 Antibody [NB300-143] - Immunofluorescence of GAP-43 (green), a molecular marker of neurite outgrowth, demonstrates intense staining in overexpressing wild-type PS-1 (E) PC-12 cells. (Teo, et al, 2005)



Immunocytochemistry/Immunofluorescence: GAP43 Antibody [NB300-143] - Mixed neuron-glial cultures stained with RPCA-GAP43 (red), blue is DNA staining.



Immunohistochemistry: GAP43 Antibody [NB300-143] - Region CA1-CA4 of the hippocampus showing strong GAP-43 staining in cell processes and neutropil using NB300-143.



Publications

Baldo G, Lorenzini DM, Santos DS et al. Shotgun proteomics reveals possible mechanisms for cognitive impairment in Mucopolysaccharidosis I mice. Mol. Genet. Metab. 2014 Dec 13 [PMID: 25541102] (WB, Mouse)

Pelletier SJ, LagaceM, St-Amour I et al. The morphological and molecular changes of brain cells exposed to direct current electric field stimulation. Int. J. Neuropsychopharmacol. 2014 Dec 07 [PMID: 25522422] (WB, Mouse)

Hong Jy, Lee Sh, Lee Sc et al. Therapeutic Potential of Induced neural Stem Cells for Spinal Cord Injury. J. Biol. Chem. 2014 Oct 06 [PMID: 25294882] (IHC, Rat)

Nakamuta S, Nakamuta N, Yamamoto Y et al. Transient Appearance of the Epithelial Invagination in the Olfactory Pit of Chick Embryos. J Vet. Med. Sci. 2014 Sep 18 [PMID: 25231436]

Smith TD, Muchlinski MN, Bhatnagar KP et al. The vomeronasal organ of Lemur catta. Am. J Primatol. 2014 Sep 12 [PMID: 25220179]

Garrett EC, Dennis JC, Bhatnagar KP et al. The vomeronasal complex of nocturnal strepsirhines and implications for the ancestral condition in primates. Anat Rec (Hoboken) 2013 Dec [PMID: 24249398] (IHC-P, Primate)

Wu M, Wallace MR, Muir D et al. Tumorigenic properties of neurofibromin-deficient Schwann cells in culture and as syngrafts in Nf1 knockout mice. J Neurosci Res. 2005 Nov 1 [PMID: 16180234] (ICC/IF, Mouse)

Graham JB, Neubauer D, Xue QS et al. Chondroitinase applied to peripheral nerve repair averts retrograde axonal regeneration Exp Neurol. 2007 Jan [PMID: 16970940] (IHC-Fr, Rat)

Bauder AR, Ferguson TA. Reproducible mouse sciatic nerve crush and subsequent assessment of regeneration by whole mount muscle analysis J Vis Exp 2012 Feb [PMID: 22395197] (ICC/IF, Mouse)

Ambjorn M, Dubreuil V, Miozzo F et al. A Loss-of-Function Screen for Phosphatases that Regulate Neurite Outgrowth Identifies PTPN12 as a Negative Regulator of TrkB Tyrosine Phosphorylation. PLoS One 2013 Jun 13 [PMID: 23785422] (WB, Human)

Marks C, Belluscio L, Ibanez CF. Critical Role of GFRalpha1 in the Development and Function of the Main Olfactory System J Neurosci 2012 Nov 28 [PMID: 23197722] (IHC, ICC/IF, Mouse)

Pluznick JL, Rodriguez-Gil DJ, Hull M et al. Renal cystic disease proteins play critical roles in the organization of the olfactory epithelium PLoS One 2011 [PMID: 21614130] (IHC, ICC/IF, IHC-Fr, Rat, Mouse)

More publications at http://www.novusbio.com/NB300-143

Procedures

Protocol specific for GAP43 Antibody (NB300-143)
IHC-FFPE sections

I. Deparaffinization:

A. Treat slides with Xylene: 3 changes for 5 minutes each. Drain slides for 10 seconds between changes.
B. Treat slides with 100% Reagent Alcohol: 3 changes for 5 minutes each. Drain slides for 10 seconds between changes.

II. Quench Endogenous Peroxidase:

A. Place slides in peroxidase quenching solution: 15-30 minutes. To Prepare 200 ml of Quenching Solution: Add 3 ml of 30% Hydrogen Peroxide to 200 ml of Methanol.
Use within 4 hours of preparation
B. Place slides in distilled water: 2 changes for 2 minutes each.

III. Retrieve Epitopes:

A. Preheat Citrate Buffer. Place 200 ml of Citrate Buffer Working Solution into container, cover and place into steamer. Heat to 90-96 degrees Celsius.
B. Place rack of slides into hot Citrate Buffer for 20 minutes. Cover.
C. Carefully remove container with slides from steamer and cool on bench, uncovered, for 20 minutes.
D. Slowly add distilled water to further cool for 5 minutes.
E. Rinse slides with distilled water. 2 changes for 2 minutes each.

IV. Immunostaining Procedure:

A. Remove each slide from rack and circle tissue section with a hydrophobic barrier pen (e.g. Liquid Blocker-Super Pap Pen).
B. Flood slide with Wash Solution. Do not allow tissue sections to dry for the rest of the procedure.
C. Drain wash solution and apply 4 drops of Blocking Reagent to each slide and incubate for 15 minutes.
D. Drain Blocking Reagent (do not wash off the Blocking Reagent), apply 200 ul of Primary Antibody solution to each slide, and incubate for 1 hour.
E. Wash slides with Wash Solution: 3 changes for 5 minutes each.
F. Drain wash solution, apply 4 drops of Secondary antibody to each slide and incubate for 1 hour.
G. Wash slides with Wash Solution: 3 changes for 5 minutes each.
H. Drain wash solution, apply 4 drops of DAB Substrate to each slide and develop for 5-10 minutes. Check development with microscope.
I. Wash slides with Wash Solution: 3 changes for 5 minutes each.
J. Drain wash solution, apply 4 drops of Hematoxylin to each slide and stain for 1-3 minutes. Increase time if darker counterstaining is desired.
K. Wash slides with Wash Solution: 2-3 changes for 2 minutes each.
L. Drain wash solution and apply 4 drops of Bluing Solution to each slide for 1-2 minutes.
M. Rinse slides in distilled water.
N. Soak slides in 70% reagent alcohol: 3 minutes with intermittent agitation.
O. Soak slides in 95% reagent alcohol: 2 changes for 3 minutes each with intermittent agitation.
P. Soak slides in 100% reagent alcohol: 3 changes for 3 minutes each with intermittent agitation. Drain slides for 10 seconds between each change.
Q. Soak slides in Xylene: 3 changes for 3 minutes each with intermittent agitation. Drain slides for 10 seconds between each change.
R. Apply 2-3 drops of non-aqueous mounting media to each slide and mount coverslip.
S. Lay slides on a flat surface to dry prior to viewing under microscope.

NOTES:
-Use treated slides (e.g. HistoBond) to assure adherence of FFPE sections to slide.
-Prior to deparaffinization, heat slides overnight in a 60 degrees Celsius oven.

-All steps in which Xylene is used should be performed in a fume hood.

-For Epitope Retrieval, a microwave or pressure cooker may be substituted for the steamer method. Adjust times as necessary depending on conditions.

-For the initial IHC run with a new primary antibody, test tissues with and without Epitope Retrieval. In some instances, Epitope Retrieval may not be necessary.

-200 ul is the recommended maximum volume to apply to a slide for full coverage. Using more than 200 ul may allow solutions to wick off the slide and create drying artifacts. For small tissue sections less than 200 ul may be used.

-5 minutes of development with DAB Substrate should be sufficient. Do not develop for more than 10 minutes. If 5 minutes of development causes background staining, further dilution of the primary antibody may be necessary.

-Hematoxylin should produce a light nuclear counterstain so as not to obscure the DAB staining. Counterstain for 1-1.5 minutes for nuclear antigens. Counterstain for 2-3 minutes for cytoplasmic and membranous antigens. If darker counterstaining is desired increase time (up to 10 minutes).

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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.

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