Product Datasheet

MAP2 Antibody - BSA Free NB300-213

Unit Size: 0.05 ml

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



Reviews: 5 Publications: 127

Protocols, Publications, Related Products, Reviews, Research Tools and Images at: www.novusbio.com/NB300-213

Updated 2/21/2025 v.20.1

Earn rewards for product reviews and publications.

Submit a publication at www.novusbio.com/publications Submit a review at www.novusbio.com/reviews/destination/NB300-213



NB300-213

MAP2 Antibody - BSA Free

Product Information	
Unit Size	0.05 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	PBS. Supplied as concentrated total IgY preparation from egg yolk. Exact concentration of target specific IgY is not quantifiable as the preparation contains both immune IgY specific for the target and also irrelevant, non-immune IgY.
Target Molecular Weight	199 kDa
Product Description	
Host	Chicken
Gene ID	4133
Gene Symbol	MAP2
Species	Human, Mouse, Rat, Feline
Reactivity Notes	Rat reactivity reported in scientific literature (PMID: 32848625). Mouse reactivity reported in scientific literature (PMID: 33086056). Feline reactivity reported from a verified customer review.
Marker	Neuronal Dendritic Marker
Specificity/Sensitivity	This antibody was raised against recombinant constructs of the entire human projection domain, and so recognizes the high molecular MAP2 forms, MAP2A and MAP2B.
Immunogen	This MAP2 antibody was developed against a mix of recombinant human construct of projection domain sequences, amino acids 377-1505: Prot-r-MAP2-P1, Prot-r-MAP2-P2 and Prot-r-MAP2-P3.
Notes	Chicken products cannot be exported to Canada.
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry- Paraffin, Knockdown Validated
Recommended Dilutions	Western Blot 1:10000-1:20000, Immunohistochemistry 1:1000-1:5000, Immunocytochemistry/ Immunofluorescence 1:5000-1:10000, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen 1:1000-1:5000, Knockdown Validated



Images

Mouse primary cultures stained with MAP2 antibody. ICC/IF image submitted by a verified customer review.

Immunofluorescent analysis of cortical neuron-glial cell culture from E20 rat stained with chicken pAb to microtubule associated protein 2 (MAP2), NB300-213, dilution 1:10,000 in red, and mouse mAb to MAP-tau, NPB2 -25162, dilution 1:2,000, in green. The blue is DAPI staining of nuclear DNA. NB300-213 antibody stains dendrites and perikarya of neurons, while NBP2-25162 antibody labels neuronal perikarya, dendrites and also axonal process. As a result perikarya and dendrites appears orange-yellow, since they contain both MAP2 and tau, while axons are green.

Western blot analysis of whole brain tissue lysates using chicken pAb to microtubule associated protein 2 (MAP2), NB300-213, dilution 1:50,000 in green: [1] protein standard (red), [2] adult rat brain, [3] embryonic E20 rat brain, [4] adult mouse brain. Strong band observed at ~280 kDa mark corresponds to two major isoforms of MAP2 protein referred to as MAP2A and MAP2B. Smaller fragments of these isoforms are also detected if the antibody is used at higher concentrations.

PEA decreases astrocyte activation in organotypic cultures of rat hippocampi and rescues neuronal CA3 damage caused by Abeta challenge. Abeta-challenged (1 ug/ml) slices of rat hippocampi were treated for 24 hours with PEA (0.1 uM) in the presence of the selective PPAR? antagonist (GW9662, 9 nM) or the selective PPARalpha antagonist (MK886, 3 uM). Representative photomicrographs of the CA3 region showing the results of immunofluorescence experiments aimed at investigating the effect of treatments on astrocyte activation and neuronal loss, as determined by immunostaining for GFAP (green) and MAP2 (red) alone or merged, respectively. Nuclei were stained with Hoechst (blue). Scale bar: 10 um. Arrows in the photomicrographs indicate astrocyte infiltration events and apoptotic condensation in the nuclei of adjacent neurons.









Page 3 of 10 v.20.1 Updated 2/21/2025

Human iPS derived neurons labeled with MAP2 (in green) at 1:5000 dilution. Image from verified customer review.

MAP2 in the retina detected by NB300-213 antibody (magenta). DAPI

(blue). Image from verified customer review.







Human DA neurons 28 DIV stained with MAP2 antibody (blue). ICC/IF image submitted by a verified customer review.

PEA inhibits astroglial proliferation and reduces neuronal loss in mixed neuroglia co-cultures exposed to Abeta. Abeta-challenged (1 ug/ml) astrocyte/neuron mixed cultures were treated with PEA (0.1 uM) i9662, 9 nM) on the presence of the selective PPAR-gamma antagonist (GWr the selective PPARalpha antagonist (MK886, 3 uM). After 24 hours of treatment, cells were processed for analyses. Immunofluorescence photomicrographs showing the effect of the treatments on astrocyte proliferation and neuronal loss, as determined by immunostaining for GFAP (green) and MAP2 (red), respectively. Arrows indicate chromatin condensation in nuclei stained with Hoechst dye (blue) as markers of apoptotic events. Scale bar: 10 um. Image collected and cropped by CiteAb from the following publication

(https://jneuroinflammation.biomedcentral.com/articles/10.1186/1742-2094-9-49), licensed under a CC-BY license.





Oxytocin receptors (Oxtr) are expressed in mouse hippocampus. Confocal images of Oxtr-expressing neurons in the CA1 subfields of the medial and caudal hippocampus from OxtrVn/+ sections, triple stained with antibodies directed against NeuN (red), MAP2 (magenta), and Venus (green). Image collected and cropped by CiteAb from the following publication (https://elifesciences.org/articles/22466), licensed under a CC-BY license.



Differential and neuron-specific Oxtr expression in mouse hippocampus. Immunohistochemical mapping of Venus expression in coronal sections of the rostral, medial, and caudal hippocampus from three weeks old OxtrVn/+ mice triple-labeled with antibodies against NeuN (red), Venus (green), and Map2 (magenta). Image collected and cropped by CiteAb from the following publication (https://elifesciences.org/articles/22466), licensed under a CC-BY license.



А

ATM activation by chloroquine alleviates senescence.(a) Immunoblots showing protein levels of ATM, NBS1, and RAP80 in human skin fibroblasts (HSFs). A gradually increased level of p16 indicates cellular senescence, while elevated yH2AX level indicates accumulated DNA damage. (b) Immunoblots showing protein levels of ATM, NBS1, and RAP80 in mouse embryonic fibroblasts (MEFs). (c) Immunoblots showing protein levels of ATM, NBS1, and RAP80 in brain tissues isolated from 3-, 10-, and 18-month-old male mice. (d) SA- β -Gal staining in HSFs treated with sh-ATM or scramble shRNA. Scale bar, 100 µm. (e) Quantification of SA- β -Gal-positive staining of (d) from five views randomly captured for each group. Data represent means ± SEM. ***p<0.001. (f) Immunoblots showing increased vH2AX and unaffected LC3I/II in HSFs treated with sh-ATM or scramble shRNA. (g) Immunoblots showing protein levels of pS1981 ATM, yH2AX, and cleaved caspase-3 in HSFs treated with 10 µM of CQ for indicated time. (h) SA-β-Gal staining in HSFs expressing either scramble or ATM shRNA treated with 1 µM CQ or DMSO (12 hr). Scale bar, 100 µm. (i) Quantification of SA- β -Gal-positive staining of (h) from five views randomly captured for each group. Data represent means ± SEM. ***p<0.001; 'N.S.' indicates no significant difference. (j) HSFs at passage 20 were continuously cultured with 1 µM CQ or DMSO, and cell number was calculated at each passage. Data represent means ± SEM. ***p<0.01. (k) Immunoblots showing protein levels of yH2AX, p62, and LC3 in MEFs treated with 1 µM CQ or DMSO. Note that CQ had little effect on the expression levels of p62 and LC3. (I) MEFs at passage one 5 were continuously cultured in 20% O2 with 1 µM CQ or DMSO, and cell number was determined at each passage. Data represent means ± SEM. ***p<0.01.10.7554/eLife.34836.006Figure 1—source data 1.Statistical analysis for SA- β -Gal positive staining.10.7554/eLife.34836.007Figure 1 -source data 2. Statistical analysis for EdU positive staining. Statistical analysis for SA-β-Gal positive staining. Statistical analysis for EdU positive staining. Decline of ATM-centered DNA repair machinery during senescence.(a) Real-time PCR analysis showing progressively elevated





mRNA level of p21 in continuously cultured human endothelial cells (HUVEC). **p<0.01. (b) SA-β-Gal staining of HUVEC cells at indicated passages. Scale bar, 100 µm. (c) HUVEC cells at P21, P18, P12, and P7 were subjected to transcriptome analysis. A minimum average rpkm value of 1.0 and maximum 10% fluctuation in young cells (P7 Vs P12) was set as the threshold. Genes were downregulated by more than 20% in pre-senescent, and senescent cells compared with young cells (P21/P18 Vs P12/P7) were selected. (d) Pathway analysis of genes identified in (c) by STRING v10. (e) Downregulation of ATM-related DNA repair genes during senescence. ATM regulates replicative senescence. (a) Representative images showing cells treated with Scramble (sh-NC) or sh-ATM. (b) Percent EdU-positive cells in sh-NC or sh-ATM treated HSFs. Views were randomly captured and at least 100 cells were included in each group. Data represent means ± SEM. ***p<0.001. (c) Immunoblots showing protein levels of pS1981 ATM and yH2AX in HSFs treated with 10 µM chloroquine (CQ) or 0.4 µM CPT (4 hr). Note that CQ activated ATM (pS1981) without increasing yH2AX, while CPT activated ATM accompanied by increased γ H2AX. (d) SA- β -Gal staining in primary MEFs treated with 1 μ M CQ or DMSO. Scale bar, 100 μ m. (e) Quantification of SA- β -Gal-positive staining of (d) from five views randomly captured for each group. Data represent means ± SEM. ***p<0.001. (f) Percent EdU-positive cells in HSFs treated with DMSO, 1 μ M or 10 μ M CQ. Views were randomly captured and at least 100 cells were included in each group. Data represent means \pm SEM. ***p<0.001. (g) Representative images showing proliferative HSFs treated with different doses of CQ for the indicated time points. (h) Immunoblots showing LC3B levels in HSFs treated with indicated dose of CQ for indicated period of time. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/29717979), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Immunocytochemistry/ Immunofluorescence: MAP2 Antibody [NB300-213] - SUMO1 conjugates are not localized to amyloid plaques. (a) Sagittal brain sections of 24 week old KI/AD & WT/AD animals were stained using anti HA antibodies (red), 6E10 antibodies (green) that label amyloid beta 1–42 among other amyloid beta variants (epitope lies within amino acids 3–8 of amyloid beta) & anti MAP2 antibodies (blue). Sections of the hippocampal subiculum are shown. Images are representatives of three independent experiments. Scale bar, 25 μ m. (b) Anti HA signal intensity in amyloid plaques & in cell nuclei was quantified using ImageJ (N = 3, ***significance between WT/AD & KI/AD, p = .0007 in Student's t test) Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29633471), licensed under a CC-BY license. Not internally tested by Novus Biologicals.







Page 6 of 10 v.20.1 Updated 2/21/2025

Immunocytochemistry/ Immunofluorescence: MAP2 Antibody [NB300-213] - Oxytocin receptors (Oxtr) are expressed in mouse hippocampus.(a) & b) Coronal sections of the hippocampus (a) & striatum (b) from OxtrVn/ + & Oxtr+/+ mice stained for Venus & DAPI (ac, anterior commisure; cx, cortex; hip, hippocampus; str, striatum). (c) Confocal images of rostral Oxtr+/+ & OxtrVn/+ brain sections including hippocampus, doublelabeled for Venus (green) & NeuN (red). (d) Confocal images of Oxtrexpressing neurons in the CA1 subfields of the medial & caudal hippocampus from OxtrVn/+ sections, triple stained with antibodies directed against NeuN (red), MAP2 (magenta), & Venus (green). (e) Representative images of hippocampal mass cultures obtained from OxtrVn/+ mice at P0 mice & processed for immunofluorescence staining at 5, 10, & 14 DIV using antibodies to Venus (green) & GAD67 (red), & DAPI (blue). (f) Quantitative analysis of Venus-positive neurons with (GAD67+) & without colabeling for GAD67 (GAD67-) in hippocampal mass cultures obtained from OxtrVn/+ mice at P0 mice & processed for immunofluorescence staining at 5, 10, & 14 DIV. Data are shown as mean ± SEM.DOI:http://dx.doi.org/10.7554/eLife.22466.015 Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/28231043), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Immunocytochemistry/ Immunofluorescence: MAP2 Antibody [NB300-213] - SUMO1 conjugates remain nuclear during increased amyloid burden. (a) Western blot analysis of subcellular fractions of 36 week old KI/WT & KI/AD mouse brain using anti HA antibody (upper two panels) & antibodies to GluN1 (a marker of the postsynaptic compartment) & Synaptophysin (a marker of the presynaptic compartment) to validate the fractionation procedure (lower two panels). H, homogenate; P1, nuclear pellet; S1, supernatant after P1 sedimentation; P2, crude synaptosomal pellet; S2, supernatant after P2 sedimentation: LP1. lysed synaptosomal membranes: LS1. supernatant after LP1 sedimentation; LP2, pellet after LS1 sedimentation, SPM, synaptic plasma membranes. Bracket indicates the anti HA signal representing SUMOylation, arrow indicates RanGAP1, stars indicate nonspecific signal detected by the anti HA antibody. (b) Brain sagittal sections of aged (36 weeks old) KI/AD (left panels) & WT/AD (right panels) mice were immunostained using antibodies directed against HA (red, labels HA HA conjugates), MAP2 (green, labels neuronal somata & dendrites), & Synapsin1 (Syn1, magenta, labels synapses). The images show triple labeled neurons of hippocampal subiculum (b), cortical layer 5 (c), & proximal apical dendrite from hippocampal CA3 (d). The white line shows the orientation of the line scan used to generate the image stack shown in the bottom side view. Scale bar: 10 µm. Note that the anti HA immunosignal is mainly located in neuronal nuclei, only background staining is observed in WT/AD mice. Little anti HA signal is observed along MAP2 positive structures & does not colocalize with Synapsin1 Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29633471), licensed under a CC-BY license. Not internally tested by Novus Biologicals.





Page 7 of 10 v.20.1 Updated 2/21/2025

Immunocytochemistry/ Immunofluorescence: MAP2 Antibody [NB300-213] - Validation of the CRISPR/Cas9 Alsin-/- cells in iPSC, NPC & iPSC-sMN.(A) Electrophoresis result of the PCR reaction using primers flanking exon three & within exon 3. Homozygous deletion was confirmed by the absence of a 2.8 kb. (B) Protein lysates from WT KOLF & Alsin-/- iPSC were loaded onto SDS-PAGE & immunoblotted with Alsin antibody. A band detected at ~184 kDa, but absent in Alsin-/-, corresponds to full-length Alsin. (C) WT KOLF, Alsin-/- iPSC, & neuroprogenitor cells (NPC) were immunostained with pluripotency markers Oct4 & Lin28, & neuroprogenitor markers Sox2 & Pax6, respectively. (D-E) WT KOLF & Alsin-/- iPSC-sMN were immunostained with motor neuron markers such as ChAT, HB9, & ISL1, nuclear dye DAPI, & cytoskeletal marker MAP2. (F) WT KOLF & Alsin-/- iPSC-sMN were immunostained with antibodies against Rab5 & Alsin, along with DAPI (nuclear) & phalloidin (actin) stains. Scale bars, 10 µm. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29469808), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Immunocytochemistry/ Immunofluorescence: MAP2 Antibody [NB300-213] - PEA decreases astrocyte activation in organotypic cultures of rat hippocampi & rescues neuronal CA3 damage caused by AB challenge. Aβ-challenged (1 µg/ml) slices of rat hippocampi treated for 24 hours w/ PEA (0.1 µM) in presence of selective PPARy antagonist (GW9662, 9 nM) or selective PPAR α antagonist (MK886, 3 μ M). (A) Nissl staining showing effect of treatment on morphology of organotypic hippocampal slices. Scale bar: 80 µm. Aß caused a marked neuronal loss, mainly in CA3 region of hippocampus, as highlighted by arrows. PEA able to reverse this effect. (B) Representative photomicrographs of CA3 region showing Results of immunofluorescence experiments aimed at investigating effect of treatments on astrocyte activation & neuronal loss, as determined by immunostaining for GFAP (green) & MAP2 (red) alone or merged, respectively. Nuclei stained w/ Hoechst (blue). Scale bar: 10 3 µm. Arrows in photomicrographs indicate astrocyte infiltration events & apoptotic condensation in nuclei of adjacent neurons. (C) Relative quantification of GFAP-positive cell number as a count of astrocyte proliferation. (D) Apoptotic events detected on MAP2-expressing cells as an indication of neuronal death. For (C) & (D), average value determined by counting cells in at least five microscopic fields for each treatment. Results are presented as means ± SEM of four separate experiments. At least four slices from each experimental group observed for each experiment. Statistical analysis performed using parametric one-way analysis of variance, & multiple comparisons performed using Bonferroni test. ***P < 0.001 & *P < 0.05 vs. control; DP < 0.01 & P < 0.05 vs. A β -challenge slices. Image collected & cropped by CiteAb from following 5 publication

(https://jneuroinflammation.biomedcentral.com/articles/10.1186/1742-2094-9-49), licensed under a CC-BY license. Not internally tested by Novus Biologicals.





Page 8 of 10 v.20.1 Updated 2/21/2025

Immunocytochemistry/ Immunofluorescence: MAP2 Antibody [NB300-213] - PEA inhibits astroglial proliferation & reduces neuronal loss in mixed neuroglia co-cultures exposed to A β . A β -challenged (1 μ g/ml) astrocyte/neuron mixed cultures were treated with PEA (0.1 µM) in the presence of the selective PPARy antagonist (GW9662, 9 nM) or the selective PPARα antagonist (MK886, 3 μM). After 24 hours of treatment, cells were processed for analyses. (A) Immunofluorescence photomicrographs showing the effect of the treatments on astrocyte proliferation & neuronal loss, as determined by immunostaining for GFAP (green) & MAP2 (red), respectively. Arrows indicate chromatin condensation in nuclei stained with Hoechst dye (blue) as markers of apoptotic events. Scale bar: 10 µm. (B) Relative quantification of GFAPpositive cell number as a count of astrocyte proliferation. (C) Apoptotic events detected on MAP2-expressing cells as an indication of neuronal death. For (B) & (C), the average value was determined by counting cells in at least nine microscopic fields for each treatment. Results are presented as means ± SEM of three separate experiments. Statistical analysis was performed using parametric one-way analysis of variance, & multiple comparisons were performed using the Bonferroni test. ***P < 0.001 vs. unstimulated cells, $\Box \Box P < 0.01 \& \Box P < 0.05$ vs. A β -stimulated cultures. Image collected & cropped by CiteAb from the following publication

(https://jneuroinflammation.biomedcentral.com/articles/10.1186/1742-2094-9-49), licensed under a CC-BY license. Not internally tested by Novus Biologicals.





Publications

Chen Z, Li W, Meng B, Xu C et Al. Neuronal-enriched small extracellular vesicles trigger a PD-L1-mediated broad suppression of T cells in Parkinson's disease iScience 2024-07-15 [PMID: 39006478]

Rawat P, Teodorof-Diedrich C, Spector SA. Human immunodeficiency virus Type-1 single-stranded RNA activates the NLRP3 inflammasome and impairs autophagic clearance of damaged mitochondria in human microglia Glia 2018-12-24 [PMID: 30582668]

Nelson AT, Cicardi ME, Markandaiah SS, Han JY et Al. Glucose hypometabolism prompts RAN translation and exacerbates C9orf72-related ALS/FTD phenotypes EMBO Rep 2024-04-29 [PMID: 38684907]

Li, J;Wang, H;Ma, P;Li, T;Ren, J;Zhang, J;Zhou, M;He, Y;Yang, T;He, W;Mi, MT;Liu, YW;Dai, SS; Osteocalcinexpressing neutrophils from skull bone marrow exert immunosuppressive and neuroprotective effects after TBI Cell reports 2024-08-29 [PMID: 39213156]

Fink JJ, Delaney-Busch N, Dawes R et Al. Deep functional measurements of Fragile X syndrome human neurons reveal multiparametric electrophysiological disease phenotype Commun Biol 2024-11-07 [PMID: 39506078]

Cicardi ME, Kankate V, Sriramoji S et Al. The nuclear import receptor Kap?2 modifies neurotoxicity mediated by poly (GR) in C9orf72-linked ALS/FTD Commun Biol 2024-03-28 [PMID: 38548902]

Kapucu FE, Tujula I, Kulta O et Al. Human tripartite cortical network model for temporal assessment of alphasynuclein aggregation and propagation in Parkinson's Disease NPJ Parkinsons Dis 2024-07-28 [PMID: 39069518]

Honkamäki L, Kulta O, Puistola P et Al. Hyaluronic Acid-Based 3D Bioprinted Hydrogel Structure for Directed Axonal Guidance and Modeling Innervation In Vitro Adv Healthc Mater 2024-11-06 [PMID: 39502022]

Kim NS, Wen Z, Liu J et Al. Pharmacological rescue in patient iPSC and mouse models with a rare DISC1 mutation Nat Commun 2021-03-03 [PMID: 33658519] (Western Blot)

Chao YW, Lee YL, Tseng CS et Al. Improved CaP Nanoparticles for Nucleic Acid and Protein Delivery to Neural Primary Cultures and Stem Cells ACS Nano 2024-01-29 [PMID: 38285698]

Makarava N, Safadi T, Bocharova O et Al. Reactive microglia partially envelop viable neurons in prion diseases J Clin Invest 2024-10-03 [PMID: 39361421]

Khezerlou E, Saenz J, Prakash SS, Pan PY. Protocol for live neuron imaging analysis of basal surface fraction and dynamic availability of the dopamine transporter using DAT-pHluorin STAR Protocols 2024-10-04 [PMID: 39368094]

More publications at http://www.novusbio.com/NB300-213





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@biotechne.com Orders: nb-customerservice@bio-techne.com General: novus@novusbio.com

Products Related to NB300-213

BAF010	Goat anti-Chicken IgY Secondary Antibody [Biotin]
NB7276	Goat anti-Chicken IgM Heavy Chain Secondary Antibody
H00004133-P01-10ug	Recombinant Human MAP2 GST (N-Term) Protein
236-EG-200	EGF [Unconjugated]

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/NB300-213

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

www.novusbio.com

