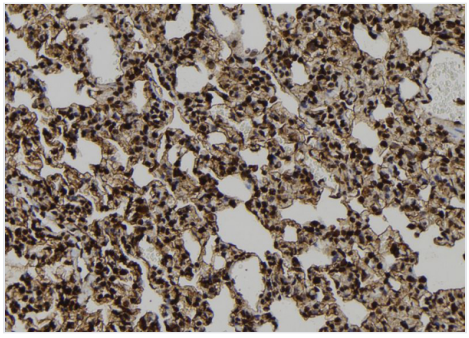
NEB2 Antibody – Rabbit Polyclonal

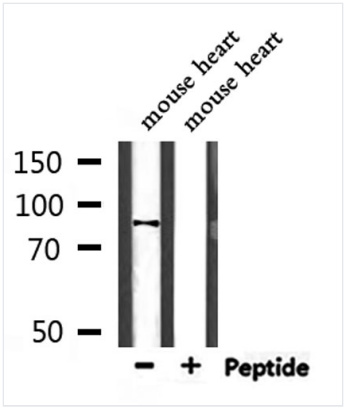
PRODUCT OVERVIEW

Product Name	NEB2, Polyclonal Antibody
Full Product Name	NEB2 Antibody
Product Gene Name	anti-NEB2 antibody
Product Synonym Gene Name	PPP1R9B
Product Synonym Names	FLJ30345; NEB2_HUMAN; Neurabin II; Neurabin-2; Neurabin-II; Neurabin2; NeurabinII; Neural tissue specific F actin binding protein II; p130; PP1bp134; PPP1R6; PPP1R9; Ppp1r9b; Protein phosphatase 1 regulatory subunit 9B; SPINO; Spinophilin
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Concentration	1mg/ml (lot specific)
Specificity	NEB2 antibody detects endogenous levels of total NEB2
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	NEB2 peptide (MBS9620411) is used for blocking the activity of NEB2 antibody (MBS9602934)
Molecular Weight	Observed: 89 kDa Predicted: 90 kDa
3D Structure	ModBase 3D Structure for Q96SB3
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide derived from human NEB2
Subcellular Location	Cytoplasm > Cytoskeleton. Nucleus. Cell Projection > Dendritic Spine. Cell Junction > Synapse. Cell Junction > Adherens Junction. Cytoplasm. Cell Membrane. Cell Projection > Lamellipodium. Cell Projection > Filopodium. Cell Projection > Ruffle Membrane. Enriched at synapse and cadherin-based cell-cell adhesion sites. In neurons, both cytosolic and membrane-associated, and highly enriched in the post-synaptic density apposed to exitatory synapses. Colocalizes with PPP1R2 at actin-rich adherens junctions in epithelial cells and in dendritic spines (By similarity). Accumulates in the lamellipodium, filopodium and ruffle membrane in response to hepatocyte growth factor (HGF) treatment.
Predicted Cross Reactivity	**Pig, Horse, Sheep, Rabbit, Dog**
Similarity	Pig (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%)
Conjugation	Unconjugated
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-NEB2 antibody	Western Blot (WB), Immunohistochemistry (IHC), ELISA (EIA)

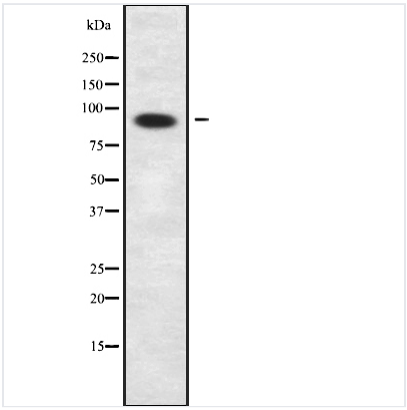
Application Notes for anti-NEB2 antibody	WB: 1:1000-3000 IHC: 1:200
Related Product Information for anti-NEB2 antibody	Function: Seems to act as a scaffold protein in multiple signaling pathways. Modulates excitatory synaptic transmission and dendritic spine morphology. Binds to actin filaments (F-actin) and shows cross-linking activity. Binds along the sides of the F-actin. May play an important role in linking the actin cytoskeleton to the plasma membrane at the synaptic junction. Believed to target protein phosphatase 1/PP1 to dendritic spines, which are rich in F-actin, and regulates its specificity toward ion channels and other substrates, such as AMPA-type and NMDA-type glutamate receptors. Plays a role in regulation of G-protein coupled receptor signaling, including dopamine D2 receptors and alpha-adrenergic receptors. May establish a signaling complex for dopaminergic neurotransmission through D2 receptors by linking receptors downstream signaling molecules and the actin cytoskeleton. Binds to ADRA1B and RGS2 and mediates regulation of ADRA1B signaling. May confer to Rac signaling specificity by binding to both, RacGEFs and Rac effector proteins. Probably regulates p70 S6 kinase activity by forming a complex with TIAM1 (By similarity). Required for hepatocyte growth factor (HGF)-induced cell migration. Subunit Structure: Interacts with DCLK2 (By similarity). Possibly exists as a homodimer, homotrimer or a homotetramer. Interacts with F-actin, PPP1CA, neurabin-1, TGN38 and D2 dopamine receptor. Interacts with RGS1, RGS2, RGS4, RGS19 and ADRA1B, ADRA2A, ADRA2B, ADRA2C, CDKN2A, PPP1R2, RASGFR1 and TIAM1. Interacts (via C-terminus) with SPATA13 (via C-terminal tail). Interacts with ADRA2B. Post-translational Modifications: Stimulation of D1 (but not D2) dopamine receptors induces Ser-94 phosphorylation. Dephosphorylation of Ser-94 is mediated mainly by PP1 and to a lesser extent by PP2A. Phosphorylation of spinophilin disrupts its association with F-actin, but does not affect its binding to PP1 (By similarity). Similarity: The PP1 binding region is natively unstructured, upon PP1 binding, it acquires structure, blocks a substrate-binding site, and restricts PP1 phosphatase specificity to a subset of substrates.
Other Notes	Small volumes of anti-NEB2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NEB2 purchase	MBS9602934 is an antibody targeting NEB2. Also known as NEB2 Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Immunohistochemistry (IHC) of anti-NEB2 antibody
MBS9602934 at 1/100 staining Rat lung tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



Western Blot (WB) of anti-NEB2 antibody
Western blot analysis of extracts from mouse heart, using NEB2 Antibody.



Western Blot (WB) of anti-NEB2 antibody
Western blot analysis NEB2 using 293 whole cell lysates

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NEB2. It may not necessarily be applicable to this product.

NCBI GI #	140972063
NCBI GeneID	84687
NCBI Accession #	NP_115984.3
UniProt Primary Accession #	Q96SB3
UniProt Secondary Accession #	Q8TCR9
UniProt Related Accession #	Q96SB3
GenBank Nucleotide #	NM_032595.4
NCBI Official Full Name	neurabin-2
NCBI Official Synonym Full Names	protein phosphatase 1 regulatory subunit 9B
NCBI Official Symbol	PPP1R9B
NCBI Official Synonym Symbols	Spn; SPINO; PPP1R6; PPP1R9
UniProt Protein Name	Neurabin-2
UniProt Synonym Protein Names	Neurabin-II; Protein phosphatase 1 regulatory subunit 9B; Spinophilin
UniProt Gene Name	PPP1R9B
UniProt Synonym Gene Names	PPP1R6
NCBI Protein Information	neurabin-2
NCBI Summary for NEB2	This gene encodes a scaffold protein that functions as a regulatory subunit of protein phosphatase 1a. Expression of this gene is particularly high in dendritic spines, suggesting that the encoded protein may play a role in receiving signals from the central nervous system. The encoded protein has putative tumor suppressor function and decreased expression has been observed in tumors. [provided by RefSeq, Feb 2014]
UniProt Comments for NEB2	Seems to act as a scaffold protein in multiple signaling pathways. Modulates excitatory synaptic transmission and dendritic spine morphology. Binds to actin filaments (F-actin) and shows cross-linking activity. Binds along the sides of the F-actin. May play an important role in linking the actin cytoskeleton to the plasma membrane at the synaptic junction. Believed to target protein phosphatase 1/PP1 to dendritic spines, which are rich in F-actin, and regulates its specificity toward ion channels and other substrates, such as AMPA-type and NMDA-type glutamate receptors. Plays a role in regulation of G-protein coupled receptor signaling, including dopamine D2 receptors and alpha-adrenergic receptors. May establish a signaling complex for dopaminergic neurotransmission through D2 receptors by linking receptors downstream signaling molecules and the actin cytoskeleton. Binds to ADRA1B and RGS2 and mediates regulation of ADRA1B signaling. May confer to Rac signaling specificity by binding to both, RacGEFs and Rac effector proteins. Probably regulates p70 S6 kinase activity by forming a complex with TIAM1 (). Required for hepatocyte growth factor (HGF)-induced cell migration.
Research Articles on NEB2	**1.** Study determined that spinophilin binding to neurofilament medium required overexpression of the catalytic subunit of protein kinase A and was decreased by cyclin-dependent protein kinase 5.
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