

# Product Datasheet

## Stathmin-2/STMN2 Antibody - BSA Free NBP1-49461

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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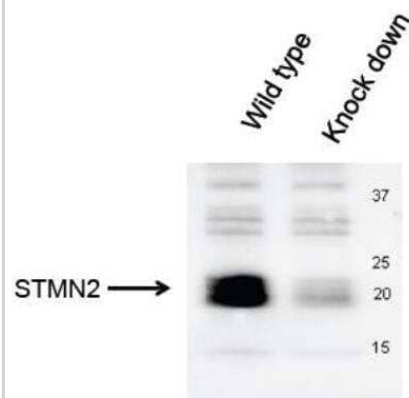
**NBP1-49461**

Stathmin-2/STMN2 Antibody - BSA Free

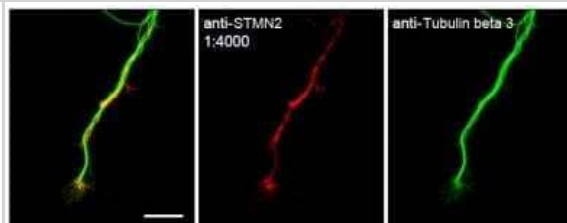
<b>Product Information</b>	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	1.0 mg/ml
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	0.02% Sodium Azide
<b>Isotype</b>	IgG
<b>Purity</b>	Immunogen affinity purified
<b>Buffer</b>	PBS
<b>Target Molecular Weight</b>	22 kDa
<b>Product Description</b>	
<b>Description</b>	Novus Biologicals Rabbit Stathmin-2/STMN2 Antibody - BSA Free (NBP1-49461) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-Stathmin-2/STMN2 Antibody: Cited in 94 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Rabbit
<b>Gene ID</b>	11075
<b>Gene Symbol</b>	STMN2
<b>Species</b>	Human, Mouse, Rat, Bovine
<b>Reactivity Notes</b>	Mouse reactivity reported in scientific literature (PMID:32778834).
<b>Immunogen</b>	C-terminal peptide of mouse STMN2. [Swiss-Prot P55821]
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, In vitro assay, In vivo assay, Immunohistochemistry Whole-Mount, Knockdown Validated
<b>Recommended Dilutions</b>	Western Blot 1 - 2 ug/ml, Immunohistochemistry 1:200 - 1:500, Immunocytochemistry/ Immunofluorescence 1 - 2 ug/ml, Immunohistochemistry-Paraffin reported in scientific literature (PMID 31182472), Immunohistochemistry-Frozen 1:200 - 1:500, In vitro assay reported in scientific literature (PMID 22726832), In vivo assay reported in scientific literature (PMID 22726832), Immunohistochemistry Whole-Mount reported in scientific literature (PMID 35042776), Knockdown Validated
<b>Application Notes</b>	In Western blot a band can be seen at ~22 kDa. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

## Images

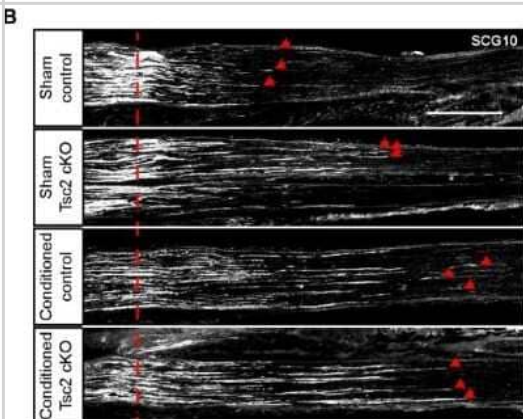
Analysis of endogenous STMN2 in mouse dorsal root ganglia (DRG) neurons. A partial siRNA knockdown was used in the second lane. NBP1-49461 was used at a dilution of 1:1000. Image courtesy of Dr. Jung Eun Shin.



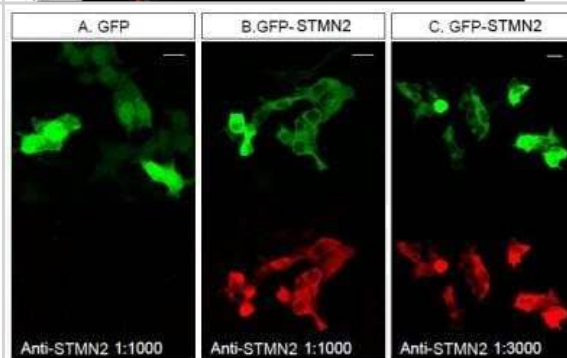
Staining of STMN2 in primary mouse dorsal root ganglia (DRG) neurons. Image shows the expected staining of endogenous STMN2 in axons and growth cones. Tubulin is a marker of axons. NBP1-49461 was used at a dilution of 1:4000. Image courtesy of Dr. Jung Eun Shin.



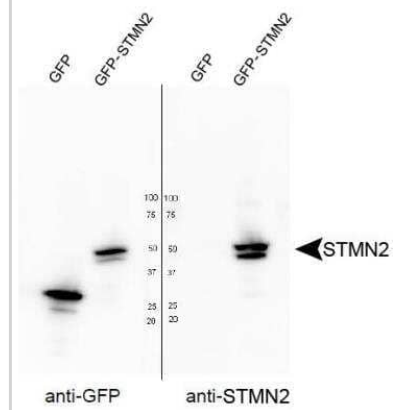
Neuronal deletion of Tsc2 improves axon regeneration within the first 2 d following nerve injury. SCG10 immunostaining of sciatic nerves 1 d after crush injury in control and Tsc2 cKO mice with (conditioned) or without (sham) a conditioning injury. Red dotted line denotes the crush site while red arrowheads point to the three longest axons. Scale bar: 500  $\mu$ m. Image collected and cropped by Citeab from the following publication (Nociceptor Deletion of Tsc2 Enhances Axon Regeneration by Inducing a Conditioning Injury Response in Dorsal Root Ganglia. *Eneuro* (2019) licensed under a CC-BY license.



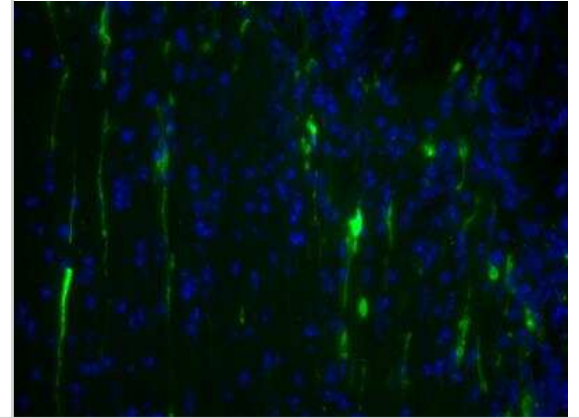
Staining of STMN2 in HEK293T cells transfected with GFP or a GFP-STMN2 fusion. NBP1-49461 was used at a dilution of 1:1000 (A, B) and 1:3000 (C). Image courtesy of Dr. Jung Eun Shin.



Analysis of STMN2 in HEK293T cells transfected with GFP or a GFP-STMN2 fusion. NBP1-49461 was used at a dilution of 1:4000. Image courtesy of Dr. Jung Eun Shin.



Stathmin-2/STMN2 immunoreactivity at the trigeminal root entry zone (antibody diluted 1:1000, tissue taken from a mouse with experimental autoimmune encephalomyelitis). Image from verified customer review.



## Publications

Ko, SH;Cho, KA;Li, X;Ran, Q;Liu, Z;Chen, L; GPX modulation promotes regenerative axonal fusion and functional recovery after injury through PSR-1 condensation *Nature communications* 2025-01-27 [PMID: 39870634]

Liu R, Zhou B Harmine promotes axon regeneration through enhancing glucose metabolism *The Journal of Biological Chemistry* 2025-02-02 [PMID: 39904483]

Feng, R;Rosen, SF;Ansari, I;John, S;Thomsen, MB;Avraham, O;Geoffroy, CG;Cavalli, V; Endothelin B receptor inhibition rescues aging-dependent neuronal regenerative decline *eLife* 2025-09-09 [PMID: 40924015]

Heo, K;Ho, TS;Zeng, X;Turnes, BL;Arab, M;Jayakar, S;Chen, K;Kimourtzis, G;Condro, MC;Fazzari, E;Song, X;Tabitha Hees, J;Xu, Z;Chen, X;Barrett, LB;Perrault, L;Pandey, R;Zhang, K;Bhaduri, A;He, Z;Kornblum, HI;Hubbs, J;Woolf, CJ; Non-muscle myosin II inhibition at the site of axon injury increases axon regeneration *Nature communications* 2025-03-26 [PMID: 40140393]

Chadwick J, Decourt C, Müller F et al. Dietary-dependent sensitization of neuronal leptin signaling promotes neural repair after injury via cAMP and gene transcription. *Neuron* 2025-09-04 [PMID: 40812302]

Avraham O, Le J, Leahy K et al. Analysis of neuronal injury transcriptional response identifies CTCF and YY1 as co-operating factors regulating axon regeneration *Frontiers in Molecular Neuroscience* 2022-08-23 [PMID: 36081575]

Zhao XF, Huffman LD, Hafner H et al. The injured sciatic nerve atlas (iSNAT), insights into the cellular and molecular basis of neural tissue degeneration and regeneration *eLife* 2022-12-14 [PMID: 36515985]

Li F, Lo TY, Miles L et al. The Atr-Chek1 pathway inhibits axon regeneration in response to Piezo-dependent mechanosensation *Nature Communications* 2021-06-22 [PMID: 34158506]

Halawani, D;Wang, Y;Ramakrishnan, A;Estill, M;He, X;Shen, L;Friedel, RH;Zou, H; Circadian clock regulator Bmal1 gates axon regeneration via Tet3 epigenetics in mouse sensory neurons *Nature communications* 2023-08-24 [PMID: 37620297]

Di Pizio A, Marvaldi L, Birling MC et al. A conditional null allele of Dync1h1 enables targeted analyses of dynein roles in neuronal length sensing *Journal of Cell Science* 2023-03-01 [PMID: 36218033]

Jeon Y, Shin YK, Kim H et al. ?Pix Guanine Nucleotide Exchange Factor Regulates Regeneration of Injured Peripheral Axons *Int J Mol Sci* 2023-09-20 [PMID: 37762659]

Feng R, Muraleedharan Saraswathy V, Mokalled MH, Cavalli V. Self-renewing macrophages in dorsal root ganglia contribute to promote nerve regeneration *Proceedings of the National Academy of Sciences* 2023-02-14 [PMID: 36763532]

More publications at <http://www.novusbio.com/NBP1-49461>

## Procedures

### Immunocytochemistry/ Immunofluorescence Protocol for Stathmin-2/STMN2 Antibody (NBP1-49461)

#### Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and wash the cells briefly in PBS. Add 10% formalin to the dish and fix at room temperature for 10 minutes.
2. Remove the formalin and wash the cells in PBS.
3. Permeabilize the cells with 0.1% Triton X100 or other suitable detergent for 10 min.
4. Remove the permeabilization buffer and wash three times for 10 minutes each in PBS. Be sure to not let the specimen dry out.
5. To block nonspecific antibody binding, incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
6. Add primary antibody at appropriate dilution and incubate overnight at 4C.
7. Remove primary antibody and replace with PBS. Wash three times for 10 minutes each.
8. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
9. Remove secondary antibody and replace with PBS. Wash three times for 10 minutes each.
10. Counter stain DNA with DAPI if required.

### Immunohistochemistry-Paraffin Protocol for Stathmin-2/STMN2 Antibody (NBP1-49461)

#### Immunohistochemistry-Paraffin Embedded Sections

##### Antigen Unmasking:

Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer at all times).

##### Staining:

1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.



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### **Products Related to NBP1-49461**

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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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.

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