# **Product Datasheet**

# ROBO2 Antibody - BSA Free NBP1-81399

Unit Size: 0.1 ml

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



#### **Publications: 5**

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#### NBP1-81399

**ROBO2** Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See 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	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS (pH 7.2) and 40% Glycerol
Product Description	
Host	Rabbit
Gene ID	6092
Gene Symbol	ROBO2
Species	Human, Mouse, Rat, Monkey
Reactivity Notes	Mouse, rat and monkey reported in scientific literature (PMID: 32220420).
Immunogen	This antibody was developed against Recombinant ROBO2 Protein corresponding to amino acids: PVNNSNSGPNEIGNFGRGDVLPPVPGQGDKTATMLSDGAIYSSIDFTTKTSYN SSSQITQATPYATTQILHSNSIHELAVDLPDPQWKSSIQQKTDLMGFGYSLPDQ NKGNNGGKGGKKKKNKNSSKPQKNNGSTWA
Product Application Details	
Applications	Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Knockout Validated
Recommended Dilutions	Immunohistochemistry 1:200 - 1:500, Immunocytochemistry/ Immunofluorescence Reported in scientific literature (PMID: 34267315), Immunohistochemistry-Paraffin 1:200 - 1:500, Knockout Validated Reported in scientific literature (PMID: 32220420).
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended.

#### Images

Immunohistochemistry: ROBO2 Antibody [NBP1-81399] - Anti-ROBO1 and anti-ROBO2 (NBP1-81399) staining in the corresponding KO embryos, showing the specificity of the antibodies. Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/31392959/) licensed under a CC-BY license.





Immunohistochemistry-Paraffin: ROBO2 Antibody [NBP1-81399] -Staining of human cerebral cortex shows moderate positivity in neuronal processes in neuropil.



Immunohistochemistry-Paraffin: ROBO2 Antibody [NBP1-81399] -Staining of human kidney shows negative to very weak cytoplasmic positivity in cells in tubules.

Immunohistochemistry-Paraffin: ROBO2 Antibody [NBP1-81399] -Staining of human liver shows very weak cytoplasmic positivity in hepatocytes.

Immunohistochemistry-Paraffin: ROBO2 Antibody [NBP1-81399] - Staining of human placenta shows strong cytoplasmic positivity in trophoblastic cells.



Immunohistochemistry-Paraffin: ROBO2 Antibody [NBP1-81399] -Staining of mouse embryo E14 shows strong positivity in developing olfactory bulb and olfactory nerve.

С Immunohistochemistry: ROBO2 Antibody [NBP1-81399] - Lateral positioning of ROBO1-expressing longitudinal axons in Nova1/2 dKO embryos.(A) Anti-ROBO1 staining of transverse sections of E12.5 lumbar spinal cords. The antibodies do not distinguish between isoforms. ROBO1 was expressed at a low level on precrossing axons & was highly upregulated on postcrossing axons in both WT & Nova1/2 dKO embryos. ROBO1-expressing axons displayed the same lateral positioning defect as anti-L1 labeled axons (compare with Figure 4B). Reducing Robo1 (e6b+) partially rescued the lateral positioning defect in Nova1/2 dKO embryos, while reducing Robo2(e6b+) alone did not rescue. Reducing Robo1/2(e6b+) together further rescued the defect. Arrows indicate the lateral funiculus (LF) & ventral funiculus (VF). Scale bar, 50 µm. (B) Quantification of the lateral positioning of ROBO1-expressing axons in A. Data are represented as the mean ± SD (one-way ANOVA & Bonferroni post test; animal numbers & p values are indicated; ns, not significant). (C) Anti-ROBO2 staining of transverse sections of E12.5 lumbar spinal cords. The antibodies do not distinguish between isoforms. ROBO2 was primarily expressed by axons in the lateral funiculi, & the overall patterns were comparable between the WT & Nova1/2 dKO embryos. (D) Anti-ROBO1 & anti-ROBO2 staining in the corresponding KO embryos, showing the specificity of the antibodies. The Robo1 KO was generated by trapping the protein product in intracellular compartments (Friedel et al., 2005). ROBO1 expression was seen in neuronal cell bodies but not in axons in Robo1 KO spinal cords, as previously reported (Long et al., 2004). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31392959), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

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Anti-ROBO2 E12:5 lumbar E12:5 lumbar



#### **Publications**

Johnson V, Junge HJ, Chen Z Temporal regulation of axonal repulsion by alternative splicing of a conserved microexon in mammalian Robo1 and Robo2 Elife 2019-08-08 [PMID: 31392959]

Jabbari K, Cheng Q, Winkelmaier G Et al. CD36(+) Fibroblasts Secrete Protein Ligands That Growth-Suppress Triple-Negative Breast Cancer Cells While Elevating Adipogenic Markers for a Model of Cancer-Associated Fibroblast Int J Mol Sci 2022-11-11 [PMID: 36361532] (ICC/IF, Human)

Details:

Citation using the FITC version of this antibody.

O'Donnell Jc, Purvis Em, Helm Kvt Et Al. An implantable human stem cell-derived tissue-engineered rostral migratory stream for directed neuronal replacement Communications biology 2021-07-15 [PMID: 34267315] (ICC/IF)

Pisarek-Horowitz A, Fan X, Kumar S et Al. Loss of Roundabout Guidance Receptor 2 (Robo2) in Podocytes Protects Adult Mice from Glomerular Injury by Maintaining Podocyte Foot Process Structure Am. J. Pathol. 2020-03-20 [PMID: 32220420] (WB, ICC/IF, KO, Human, Rat, Mouse, Monkey)

Sanz-Pamplona R, Berenguer A, Cordero D et al. Aberrant gene expression in mucosa adjacent to tumor reveals a molecular crosstalk in colon cancer. Mol Cancer 2014-03-05 [PMID: 24597571] (IF/IHC, Human)







## 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 NBP1-81399

NBP1-81399PEP	ROBO2 Recombinant Protein Antigen
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

#### 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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