# Product Datasheet

## MTSS1 Antibody - BSA Free
## NBP2-24716

Unit Size: 0.1 mg

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

www.novusbio.com technical@novusbio.com

**Publications: 2**

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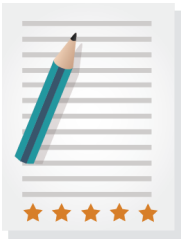
www.novusbio.com/NBP2-24716

Updated 9/9/2025 v.20.1





# NBP2-24716

MTSS1 Antibody - BSA Free

## Product Information

| | |
|---|---|
| **Unit Size** | 0.1 mg |
| **Concentration** | 1.0 mg/ml |
| **Storage** | Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles. |
| **Clonality** | Polyclonal |
| **Preservative** | 0.05% Sodium Azide |
| **Isotype** | IgG |
| **Purity** | Protein G purified |
| **Buffer** | PBS |

## Product Description

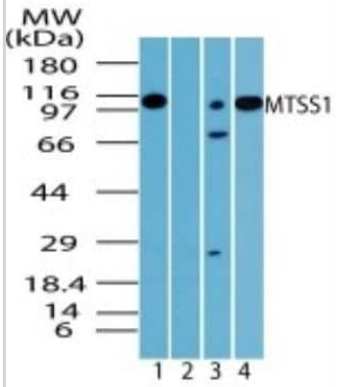
| | |
|---|---|
| **Description** | Novus Biologicals Rabbit MTSS1 Antibody - BSA Free (NBP2-24716) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-MTSS1 Antibody: Cited in 2 publications. All Novus Biologicals antibodies are covered by our 100% guarantee. |
| **Host** | Rabbit |
| **Gene ID** | 9788 |
| **Gene Symbol** | MTSS1 |
| **Species** | Human, Mouse, Primate |
| **Reactivity Notes** | The amino acid sequence used as immunogen is 100% homologous in human (isoform CRA_b), 94% homologous in monkey, and 70% homologous in rat. Mouse reactivity reported in scientific literature (PMID: 29972794). |
| **Immunogen** | A portion of amino acid 670-720 of human MTSS1 protein was used as the immunogen. |

## Product Application Details

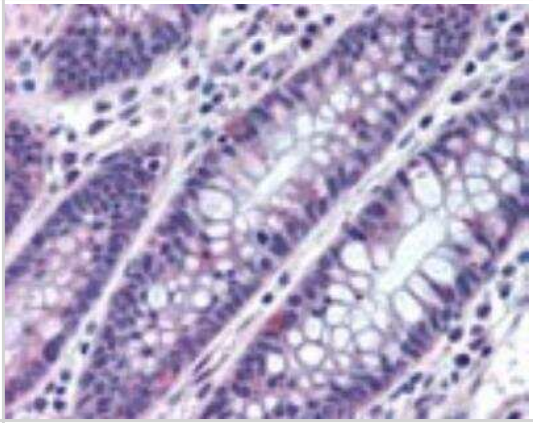
| | |
|---|---|
| **Applications** | Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry |
| **Recommended Dilutions** | Western Blot 1-4 ug/ml, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 29972794), Immunohistochemistry-Paraffin 10 ug/ml |

## Images

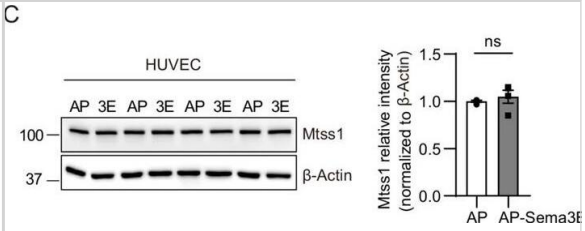
Western Blot: MTSS1 Antibody [NBP2-24716] - Analysis of MTSS1 in human testis lysate in the 1) absence and 2) presence of immunizing peptide, 3) mouse and 4) rat testis lysate using NBP2-24716 at 2 ug/ml, 4 ug/ml and 2 ug/ml, respectively.



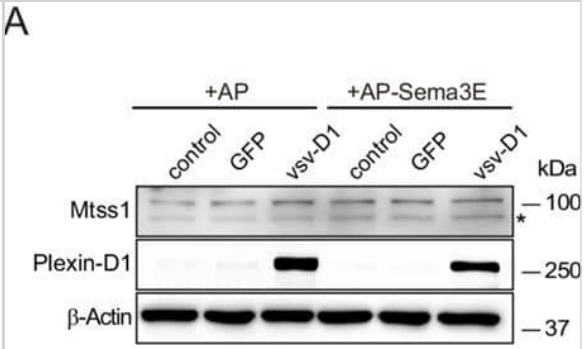
Immunohistochemistry-Paraffin: MTSS1 Antibody [NBP2-24716] - Analysis of human colon using this antibody at 10 ug/ml.



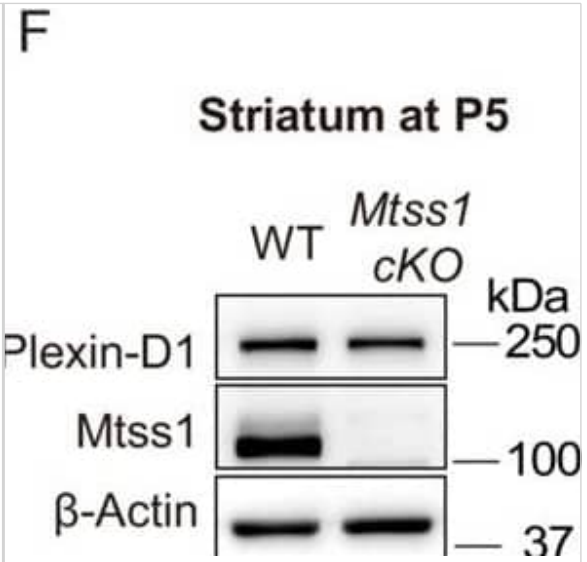
No Mtss1 was found in endothelial cells at E14.5, and no vascular defects were observed in Mtss1-conditional knockout (KO) mice.(A) Fluorescence in situ hybridization for Plxnd1 mRNA (green) and Mtss1 mRNA (red) in the brain and dorsal trunk at E14.5. White dotted boxes are shown in the inset image on the bottom. Scale bars, 100 μm for brain, 50 μm for dorsal trunk. (B) 3D vascular reconstruction analysis images after CD31 immunostaining and tissue clearing obtained using multifunctional fast confocal microscopy Dragonfly 502w. (C) Western blotting to analyze Mtss1 expression after AP-Sema3E (2 nM) treatment in human umbilical vein endothelial cells (HUVECs) or human cortical microvessel endothelial cells (HCMEC/D3). Error bars, mean +/- SEM; ns p>0.05 by Mann–Whitney test; AP, n = 4, AP-Sema3E, n = 4 for HUVECs, ns p>0.05 by Student's t-test; AP, n = 4, AP-Sema3E, n = 4 for HCMEC/D3s in four dependent experiments.Figure 8—figure supplement 1—source data 1.Western blots shown in Figure 8—figure supplement 1C.Western blots shown in Figure 8—figure supplement 1C. Image collected and cropped by CiteAb from the following open publication (https://elifesciences.org/articles/96891), licensed under a CC-BY license. Not internally tested by Novus Biologicals.




Expression of Mtss1 induces I-BAR domain-dependent morphological changes in COS7 cells, generating protrusions.(A) Western blot images showing that weakly expression of endogenous Mtss1 was not altered by overexpression of Plexin-D1 with or without Sema3E in COS7 cells. Asterisk indicates nonspecific band. (B) Quantification of the band intensity in (A). Error bars, mean +/- SEM; ns p>0.05 by two-way ANOVA with Bonferroni's post hoc correction for multiple comparisons; n = 3. (C) Schematics describing the full-length construct of Mtss1-myc and its deletion mutant constructs (Mtss1ΔI-BAR-myc, Mtss1ΔWH2-myc, and I-BAR-myc). (D) Immunocytochemistry images taken after overexpression of each construct. Constructs show the I-BAR domain leading to diverse cell protrusion morphologies. Some of the protrusions were excessively spiked or thin and long (arrowheads). Overexpression of the I-BAR domain only (I-BAR-myc) can induce extreme protrusion structures. Scale bar, 20 μm.Figure 3—figure supplement 1—source data 1.Western blots shown in Figure 3—figure supplement 1A.Western blots shown in Figure 3—figure supplement 1A. Image collected and cropped by CiteAb from the following open publication (https://elifesciences.org/articles/96891), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



The absence of Mtss1 does not affect medium spiny neuron (MSN) survival, dendritic arborization, and Plexin-D1 expression during striatonigral pathway development.(A) Immunohistochemistry staining for cleaved caspase 3 (CC3) in the striatum of wild-type (WT) or Mtss1 conditional knockout (cKO) mice. The white dotted boxes on the left images are shown in the inset images on the right at a better resolution. Scale bar, 25 μm. (B) Quantification of cell death by the number of CC3-positive cells in a 1 mm2 area covering the dorsal part of the striatum in WT or Mtss1 cKO mice. Error bars, mean +/- SEM; ns p>0.05 by Mann–Whitney test; WT, n = 20; Mtss1 cKO mice, n = 20 (five sections/mouse). (C) Representative images of Golgi staining at low (top panels) and high (bottom panels) magnification. Scale bars, 100 μm. Sholl analysis of dendritic morphology (D) and dendritic length (E) performed by using Neurolucida360 in 3D analysis. Error bars, mean +/- SEM; ns p>0.05 by Student's t-test; WT, n = 12, and Mtss1 cKO mice, n = 15, from three mice. (F, G) Western blot images and quantification of Plexin-D1 expression in the striatum of WT or Mtss1 cKO mice at P5. Error bars, mean +/- SEM; *p<0.05 by Student's t-test; WT mice, n = 3, and Mtss1 cKO mice, n = 4. (H) Plexin-D1 expression in MSNs obtained from the striatum of WT or Mtss1 cKO mice at P0 and measured at DIV6 in culture. (I) Quantification of the western blots shown in (H). Error bars, mean +/- SEM; *p<0.05, by Student's t-test; n = 3 for WT, n = 3 for KO in three independent experiments.Figure 7—figure supplement 3—source data 1.Raw uncropped western blot & gel images.Western blots shown in Figure 7—figure supplement 3F and H.Raw uncropped western blot & gel images.Western blots shown in Figure 7—figure supplement 3F and H. Image collected and cropped by CiteAb from the following open publication (https://elifesciences.org/articles/96891), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

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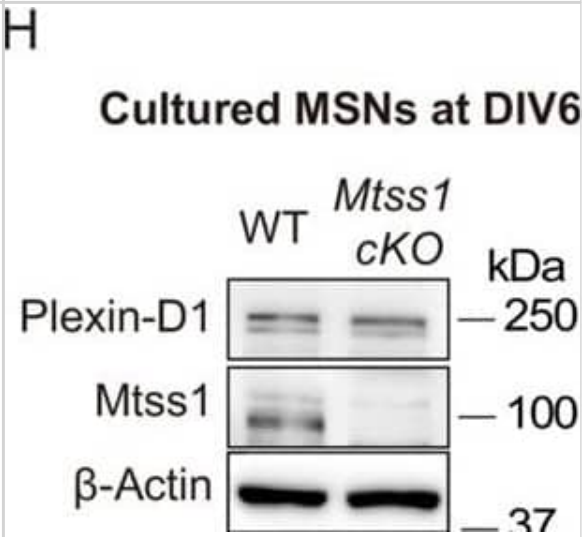

## Publications

Namsuk Kim, Yan Li, Ri Yu, Hyo-Shin Kwon, Anji Song, Mi-Hee Jun, Jin-Young Jeong, Ji Hyun Lee, Hyun-Ho Lim, Mi-Jin Kim, Jung-Woong Kim, Won-Jong Oh, Jun Ding, K VijayRaghavan Repulsive Sema3E-Plexin-D1 signaling coordinates both axonal extension and steering via activating an autoregulatory factor, Mtss1 eLife 2024-03-25 [PMID: 38526535]

kawabata Galbraith k, Fujishima k, Mizuno H et al. MTSS1 Regulation of Actin-Nucleating Formin DAAM1 in Dendritic Filopodia Determines Final Dendritic Configuration of Purkinje Cells Cell Rep. 2018-07-03 [PMID: 29972794] (ICC/IF, Mouse)

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## Products Related to NBP2-24716

| | |
|---|---|
| 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 |

### 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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