

# Product Datasheet

## TSPAN1 Antibody - BSA Free

### NBP2-33867

Unit Size: 0.1 ml

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

[www.novusbio.com](http://www.novusbio.com)



[technical@novusbio.com](mailto:technical@novusbio.com)

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Updated 2/12/2026 v.20.1

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**NBP2-33867**

TSPAN1 Antibody - BSA Free

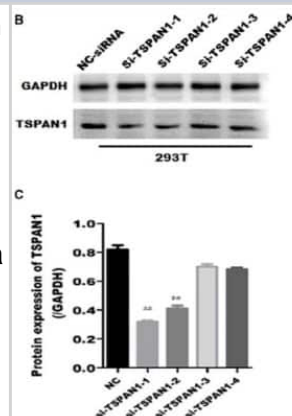
Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Affinity purified
Buffer	PBS (pH 7.2) and 40% Glycerol

Product Description	
Description	Novus Biologicals Rabbit TSPAN1 Antibody - BSA Free (NBP2-33867) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-TSPAN1 Antibody: Cited in 4 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	10103
Gene Symbol	TSPAN1
Species	Human
Immunogen	This antibody was developed against a recombinant protein corresponding to amino acids: TMAEHFLTLLVPAIKKDYGSQEDFTQVWNTTMKGLKCCGFTNYTDFEDSPYF KNSAFPPFCCNDNVTNTANETCTKQKAHDQKVEGCFNQLLYDIRTNAVTV

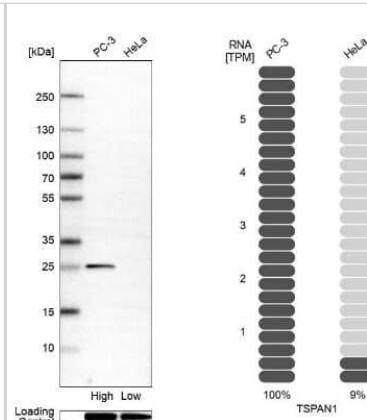
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Knockdown Validated
Recommended Dilutions	Western Blot 0.04 - 0.4 ug/ml, Immunohistochemistry 1:200 - 1:500, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:200 - 1:500, Knockdown Validated
Application Notes	IHC-Paraffin, HIER pH 6 retrieval is recommended. ICC/IF, Fixation Permeabilization: Use PFA/Triton X-100.

**Images**

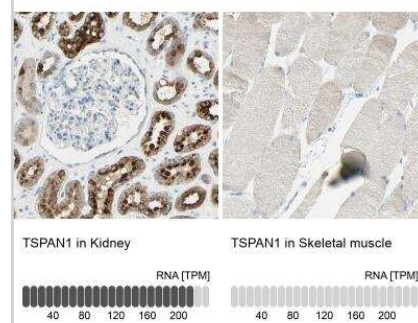
Western Blot: TSPAN1 Antibody [NBP2-33867] - Knockdown tetraspanin 1 (TSPAN1) promoted molecular characterization of epithelial-to-mesenchymal transition state in alveolar epithelial cells. Interference efficiency of siRNA for TSPAN1 was identified in 293T cells by Western blotting. Four siRNA sequences, named si-TSPAN1-1, si-TSPAN1-2, si-TSPAN1-3 and si-TSPAN1-4, were designed to aim four target sites for TSPAN1. Image collected and cropped by CiteAb from the following publication (<https://doi.wiley.com/10.1111/jcmm.14258>), licensed under a CC-BY license.



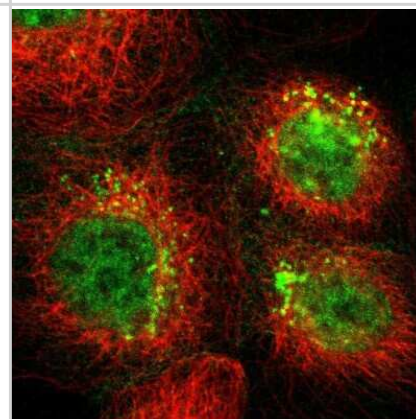
Western Blot: TSPAN1 Antibody [NBP2-33867] - Analysis in human cell line PC-3 and human cell line HeLa.



Immunohistochemistry-Paraffin: TSPAN1 Antibody [NBP2-33867] - Analysis in human kidney and skeletal muscle tissues. Corresponding RNA-seq data are presented for the same tissues.



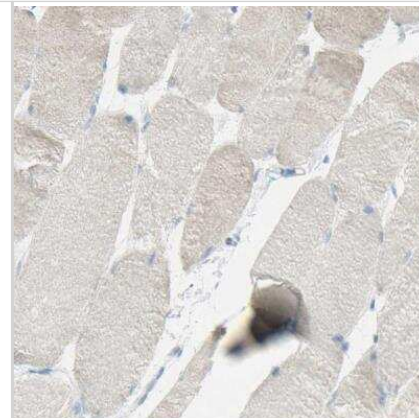
Immunocytochemistry/Immunofluorescence: TSPAN1 Antibody [NBP2-33867] - Staining of human cell line A-431 shows localization to nucleoplasm & vesicles. Antibody staining is shown in green.



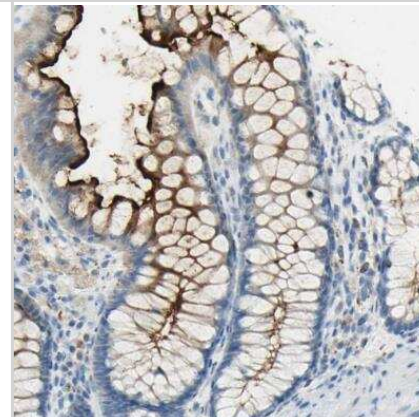
Western Blot: TSPAN1 Antibody [NBP2-33867] - Screening of gene in idiopathic pulmonary fibrosis (IPF) and identification of tetraspanin 1 (TSPAN1) in vivo and vitro. Western blotting was used to detect the protein expression of TSPAN1 in A549, alveolar epithelial type II (ATII) cells, MRC-5 and rat fibroblasts. Image collected and cropped by CiteAb from the following publication (<https://doi.wiley.com/10.1111/jcmm.14258>), licensed under a CC-BY license.



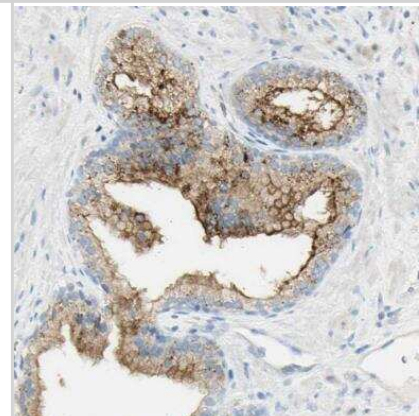
Immunohistochemistry-Paraffin: TSPAN1 Antibody [NBP2-33867] - Staining of human skeletal muscle shows no positivity in myocytes as expected.



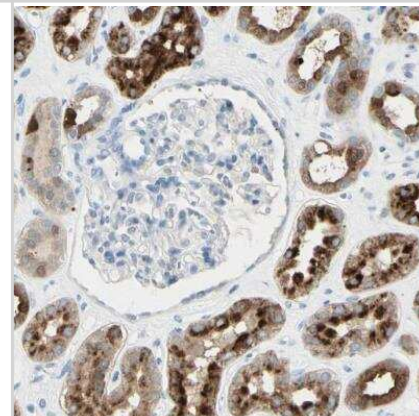
Immunohistochemistry-Paraffin: TSPAN1 Antibody [NBP2-33867] - Staining of human colon shows weak to moderate cytoplasmic positivity in glandular cells.



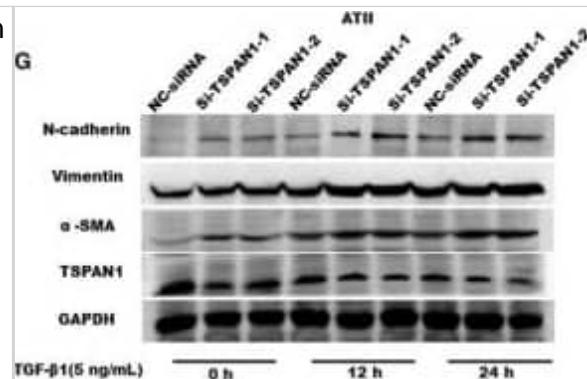
Immunohistochemistry-Paraffin: TSPAN1 Antibody [NBP2-33867] - Staining of human prostate shows moderate to strong cytoplasmic positivity in glandular cells.



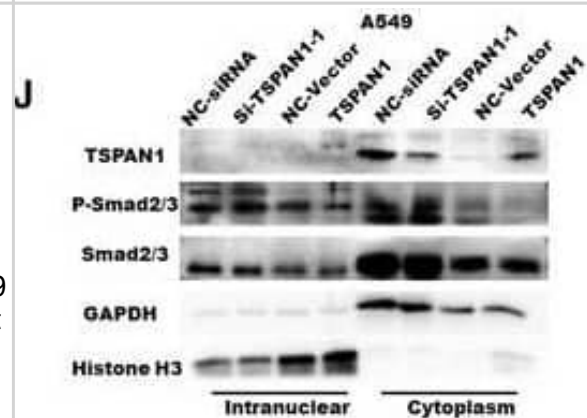
Immunohistochemistry-Paraffin: TSPAN1 Antibody [NBP2-33867] - Staining of human kidney shows moderate to strong cytoplasmic positivity in cells in tubules.



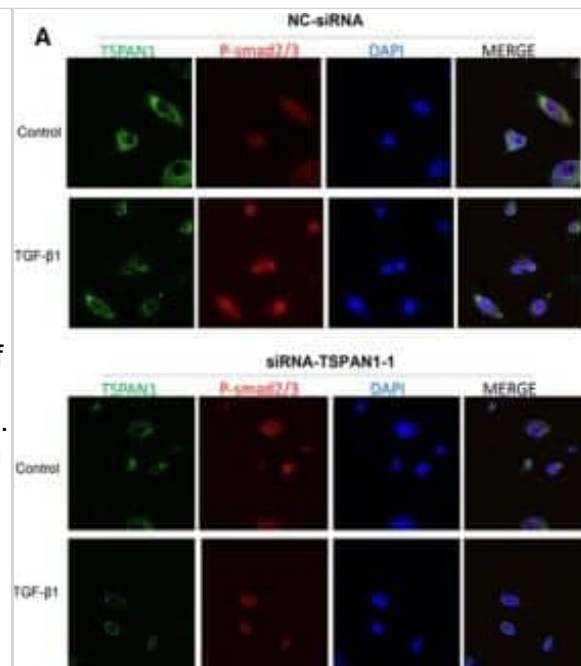
Western Blot: TSPAN1 Antibody [NBP2-33867] - Knockdown tetraspanin 1 (TSPAN1) promoted cell migration & transforming growth factor  $\beta$ 1 (TGF $\beta$ 1) induced epithelial to mesenchymal transition related proteins in alveolar epithelial cells. A, Wound healing assay following silencing of TSPAN1 in A549 cells. B, Quantification results of wound healing assay. Bar chart represents the ratio of every group to negative control (NC) groups. The data are expressed as the means  $\pm$  SEM (n = 3), with results representative of three independent experiments. (\*P < 0.05 vs NC). C, Transwell migration analysis by silencing TSPAN1 in A549 cells with or without TGF $\beta$ 1 treatment (5 ng/mL, 16 h). D, Quantification of transwell migration analysis. The bar chart represents the numbers of migrating cells. The data are expressed as the means  $\pm$  SEM (n = 3), with results representative of three independent experiments. (\*\*P < 0.01 vs NC). (E,G) Western blot analysis of various proteins by silencing TSPAN1 for 24 h in A549 & alveolar epithelial type II cells with or without TGF $\beta$ 1 treatment. F, Quantification of the results in panel (E), & (H) quantification of the results in panel (G). The data are expressed as the means  $\pm$  SEM (n = 3), with results representative of three independent experiments. (\*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001 vs NC 0 h; #P < 0.05, ##P < 0.01, ###P < 0.001 vs NC 12 h;  $\Delta$ P < 0.05,  $\Delta\Delta$ P < 0.01,  $\Delta\Delta\Delta$ P < 0.001 vs NC 24 h) Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30869194>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



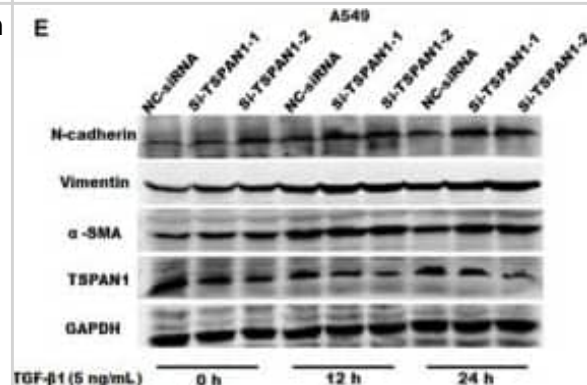
Western Blot: TSPAN1 Antibody [NBP2-33867] - Tetraspanin 1 (TSPAN1) modulates beta-catenin & phosphorylation of Smad2/3. Immunofluorescence staining analysis of TSPAN1 & phosphorylation of Smad2/3 after transfected with siRNA for TSPAN1 or negative control (NC) in A549 cells with or without TGF $\beta$ 1 treatment (5 ng/mL transforming growth factor  $\beta$ 1 [TGF $\beta$ 1] or control) (green: TSPAN1; red: P-Smad2/3; blue: 4',6-diamidino-2-phenylindole). Magnification: 1200X. (B,I) Western blot analysis of various proteins after transfected with siRNA or exogenous expression plasmid for TSPAN1 or NC in A549 & alveolar epithelial type II (A549) cells with or without TGF $\beta$ 1 treatment (5 ng/mL; 0, 12, 24 h). B, Proteins of Smad2/3, beta-catenin & phosphorylation of Smad2/3 were detected by silencing TSPAN1 in A549 cells. C, Quantification of the results in panel (A). D, The proteins expression of Smad2/3, beta-catenin & phosphorylation of Smad2/3 were detected, using western blotting after silencing TSPAN1 in A549 cells. E, Quantification of the results in panel (D). F, Proteins of Smad2/3, beta-catenin & phosphorylation of Smad2/3 were detected after overexpression of TSPAN1 in A549 cells. G, Quantification of the results in panel (F). H, Proteins of Smad2/3, beta-catenin & phosphorylation of Smad2/3 were detected by Western blotting after overexpression of TSPAN1 in A549 cells. I, Quantification of the results in panel (H). J, Phosphorylation of Smad2/3 was detected by Western blotting in intranuclear or cytoplasm after silencing TSPAN1 in A549 cells. K, Quantification of the results in panel (J). The data are expressed as the means  $\pm$  SEM (n = 3), with results representative of 3 independent experiments. (\*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001 vs NC 0 h; #P < 0.05, ##P < 0.01, ###P < 0.001 vs NC 12 h) Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30869194>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunocytochemistry/ Immunofluorescence: TSPAN1 Antibody [NBP2-33867] - Tetraspanin 1 (TSPAN1) modulates beta-catenin & phosphorylation of Smad2/3. Immunofluorescence staining analysis of TSPAN1 & phosphorylation of Smad2/3 after transfected w/ siRNA for TSPAN1 or negative control (NC) in A549 cells w/ or w/out TGF- $\beta$ 1 treatment (5 ng/mL transforming growth factor- $\beta$ 1 [TGF- $\beta$ 1] or control) (green: TSPAN1; red: P-Smad2/3; blue: 4',6-diamidino-2-phenylindole). Magnification: 1200X. (B-I) Western blot analysis of various proteins after transfected w/ siRNA or exogenous expression plasmid for TSPAN1 or NC in A549 & alveolar epithelial type II (AII) cells w/ or w/out TGF- $\beta$ 1 treatment (5 ng/mL; 0, 12, 24 h). B, Proteins of Smad2/3, beta-catenin & phosphorylation of Smad2/3 detected by silencing TSPAN1 in A549 cells. C, Quantification of Results in panel (A). D, The proteins expression of Smad2/3, beta-catenin & phosphorylation of Smad2/3 detected, using western blotting after silencing TSPAN1 in AII cells. E, Quantification of Results in panel (D). F, Proteins of Smad2/3, beta-catenin & phosphorylation of Smad2/3 detected after overexpression of TSPAN1 in A549 cells. G, Quantification of Results in panel (F). H, Proteins of Smad2/3, beta-catenin & phosphorylation of Smad2/3 detected by Western blotting after overexpression of TSPAN1 in AII cells. I, Quantification of Results in panel (H). J, Phosphorylation of Smad2/3 detected by Western blotting in intranuclear or cytoplasm after silencing TSPAN1 in A549 cells. K, Quantification of Results in panel (J). The data are expressed as the means  $\pm$  SEM (n = 3), w/ results representative of 3 independent experiments. (\*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001 vs NC 0 h; #P < 0.05, ##P < 0.01, ###P < 0.001 vs NC 12 h) Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30869194>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: TSPAN1 Antibody [NBP2-33867] - Knockdown tetraspanin 1 (TSPAN1) promoted cell migration & transforming growth factor- $\beta$ 1 (TGF- $\beta$ 1)-induced epithelial-to-mesenchymal transition-related proteins in alveolar epithelial cells. A, Wound healing assay following silencing of TSPAN1 in A549 cells. B, Quantification results of wound healing assay. Bar chart represents the ratio of every group to negative control (NC) groups. The data are expressed as the means  $\pm$  SEM (n = 3), with results representative of three independent experiments. (\*P < 0.05 vs NC). C, Transwell migration analysis by silencing TSPAN1 in A549 cells with or without TGF- $\beta$ 1 treatment (5 ng/mL, 16 h). D, Quantification of transwell migration analysis. The bar chart represents the numbers of migrating cells. The data are expressed as the means  $\pm$  SEM (n = 3), with results representative of three independent experiments. (\*\*P < 0.01 vs NC). (E,G) Western blot analysis of various proteins by silencing TSPAN1 for 24 h in A549 & alveolar epithelial type II cells with or without TGF- $\beta$ 1 treatment. F, Quantification of the results in panel (E), & (H) quantification of the results in panel (G). The data are expressed as the means  $\pm$  SEM (n = 3), with results representative of three independent experiments. (\*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001 vs NC 0 h; #P < 0.05, ##P < 0.01, ###P < 0.001 vs NC 12 h;  $\Delta$ P < 0.05,  $\Delta\Delta$ P < 0.01,  $\Delta\Delta\Delta$ P < 0.001 vs NC 24 h) Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30869194>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Liu G, Wang Y, Yang L et al. Tetraspanin 1 as a mediator of fibrosis inhibits EMT process and Smad2/3 and beta-catenin pathway in human pulmonary fibrosis J. Cell. Mol. Med. 2019-03-14 [PMID: 30869194] (ICC/IF, Human)

Zhang X, Shi G, Gao F et al. TSPAN1 upregulates MMP2 to promote pancreatic cancer cell migration and invasion via PLC gamma Oncol. Rep. 2019-01-30 [PMID: 30720116] (IF/IHC, Human)

Tian J, Zhang R, Piao H et al. Silencing Tspan1 inhibits migration and invasion, and induces the apoptosis of human pancreatic cancer cells Mol Med Rep 2018-09-01 [PMID: 30066932] (IHC-P, Human)

Duan J, Liu J, Liu Y et al. miR-491-3p suppresses the growth and invasion of osteosarcoma cells by targeting TSPAN1 Mol Med Rep 2017-08-16 [PMID: 28849017] (Human)





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### **Products Related to NBP2-33867**

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NBP2-33867PEP	TSPAN1 Recombinant Protein Antigen
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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