

# Product Datasheet

## alpha-Smooth Muscle Actin Antibody NB300-978

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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



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**NB300-978**

## alpha-Smooth Muscle Actin Antibody

Product Information	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	0.5 mg/ml
<b>Storage</b>	Store at -20C. 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>	Tris saline (20 mM Tris pH 7.3, 150 mM NaCl), 0.5% BSA
<b>Target Molecular Weight</b>	42 kDa

Product Description	
<b>Description</b>	Novus Biologicals Goat alpha-Smooth Muscle Actin Antibody (NB300-978) is a polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-alpha-Smooth Muscle Actin Antibody: Cited in 73 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Goat
<b>Gene ID</b>	59
<b>Gene Symbol</b>	ACTA2
<b>Species</b>	Human, Mouse, Rabbit
<b>Reactivity Notes</b>	Mouse reactivity reported in scientific literature (PMID: 25619662). Rabbit reactivity reported in scientific literature (PMID: 30480706 and PMID: 33263285).
<b>Marker</b>	Mesenchymal Cell Marker
<b>Specificity/Sensitivity</b>	Variants NP_001604.1 and NP_001135417.1 encode the same protein.
<b>Immunogen</b>	Alpha-Smooth Muscle Actin Antibody is made to a peptide with sequence EEEDSTALVC corresponding to N-Terminus according to NP_001604.1, NP_001135417.1.

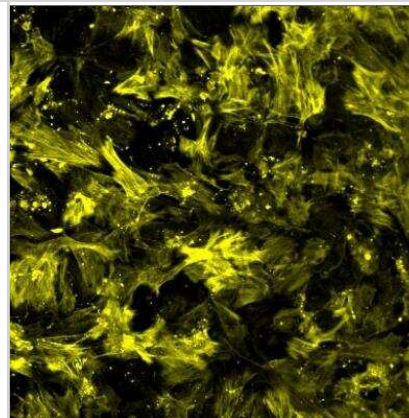
Product Application Details	
<b>Applications</b>	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Peptide ELISA, Immunohistochemistry Free-Floating
<b>Recommended Dilutions</b>	Western Blot 0.3 - 2 ug/mL, Immunohistochemistry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen, Peptide ELISA Detection limit 1:32000, Immunohistochemistry Free-Floating
<b>Application Notes</b>	Approx 45 kDa band observed in HeLa, NIH3T3, Mouse Duodenum and Human Heart lysates, and also in preliminary testing of Rat Duodenum lysates (calculated MW of 42 kDa according to NP_001604 and NP_031418.1). Alpha-Smooth Muscle Actin Antibody is validated for IHC-Fr, ICC/IF from verified customer reviews.

## Images

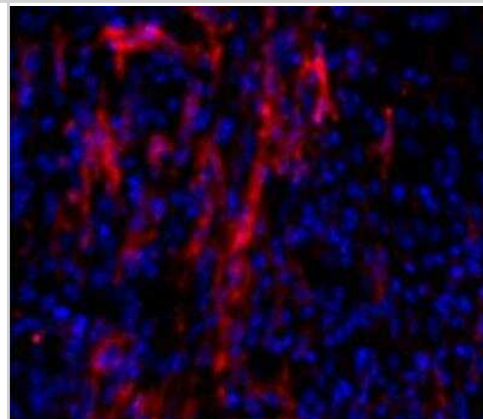
Western Blot: alpha-Smooth Muscle Actin Antibody [NB300-978] - (1ug/ml) staining of Mouse Duodenum lysate (35ug protein in RIPA buffer). Detected by chemiluminescence.

250kDa  
150kDa  
100kDa  
75kDa  
50kDa  
37kDa  
25kDa  
20kDa  
15kDa

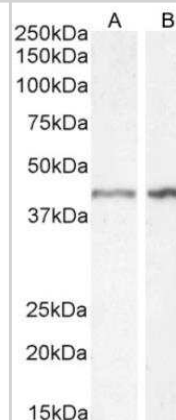
Immunocytochemistry/Immunofluorescence: alpha-Smooth Muscle Actin Antibody [NB300-978] - SMA antibody staining on mouse fibroblasts. Primary antibody at 1:1000, incubation at 4C overnight. ICC/IF image submitted by a verified customer review.



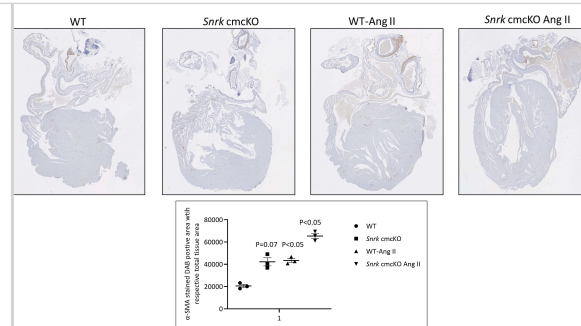
Immunohistochemistry-Frozen: alpha-Smooth Muscle Actin Antibody [NB300-978] - Infarcted mouse heart frozen tissue section immunostained with alpha-Smooth Muscle Actin Antibody. IHC-Fr image submitted by a verified customer review.



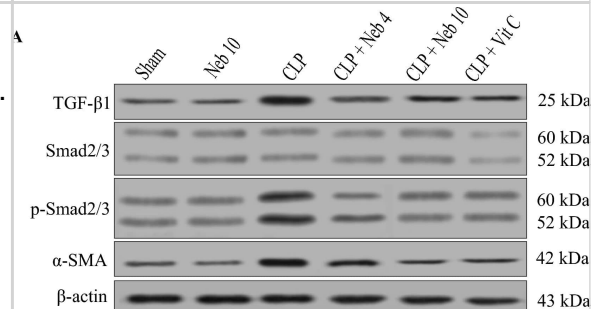
alpha-Smooth Muscle Actin Antibody [NB300-978] - (1ug/ml) staining of HeLa (A) and (2ug/ml) NIH3T3 (B) cell lysate (35ug protein in RIPA buffer). Detected by chemiluminescence.



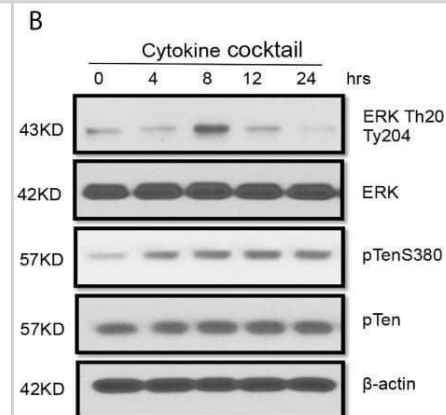
Immunohistochemistry-Paraffin: Goat Polyclonal alpha-Smooth Muscle Actin Antibody [NB300-978] - Analysis of alpha-Smooth Muscle Actin Antibody on mouse heart tissue. Image from a verified customer review.



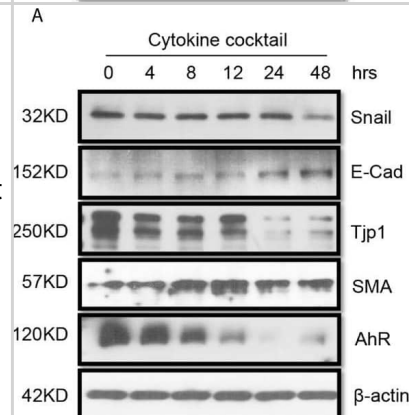
Effect of Nebivolol on TGF- $\beta$ 1, p-Smad2/3, and  $\alpha$ -SMA proteins expression. (A) representative western blot membranes of TGF- $\beta$ 1, Smad2/3, p-Smad2/3,  $\alpha$ -SMA, and  $\beta$ -actin proteins for all studied groups. (B–D) Expressions of TGF- $\beta$ 1, p-Smad2/3/t-Smad2/3, and  $\alpha$ -SMA proteins were represented densitometrically using bands in (A). Bars are represented as mean  $\pm$  SEM. The Tukey-Kramer test was used to analyze the significant differences between groups after conducting a one-way ANOVA test, where ####p < 0.001, compared to the sham group, \*p < 0.05, \*\*p < 0.01, and \*\*\*p < 0.001, compared to CLP group, \$p < 0.01, and \$\$\$p < 0.001, compared to CLP + Neb4 group. Image collected and cropped by CiteAb from the following open publication (<https://www.nature.com/articles/s41598-024-64577-5>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



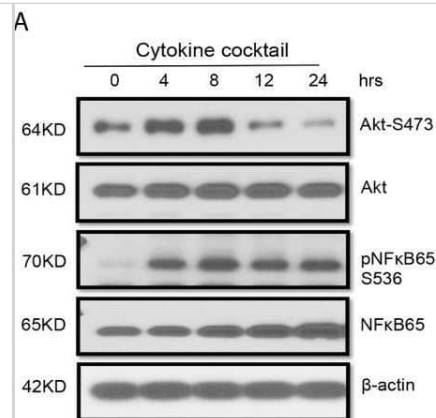
Activation of multiple signaling pathways in TEC challenged by cytokines. Primary human renal TECs were treated with the cytokine cocktail. (A, B) Western blot of PI3K–Akt pathway, NFkb pathway, and Erk signaling pathway in cells treated with cytokine cocktail. (C) Densitometric quantitation of AktS473, pNFkB65, ErkTh202/Ty204, and pTenS380. All Western blots are representative of two independent experiments. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/34305900>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western blot analysis of function protein expression on primary human renal cortical epithelial cells challenged with cytokines. Primary human renal tubular epithelial cells are challenged with cytokine cocktail (15nM IFN $\gamma$ , 6nM TNF $\alpha$ , and 3nM IL1 $\beta$ ). (A, B) Expression of Snail, E-Cad, TJP1, SMA, AhR, IDO, KMO, KY, MHC I & II. (C, D) Densitometric quantitation of protein in (A, B). All Western blots are representative of at least three independent experiments. \*P < 0.05, \*\*\*P < 0.0001 versus to cells without treatment, analysis is multiple t-tests, pairwise comparison of individual time-point to control indicated same p-value. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/34305900>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Activation of multiple signaling pathways in TEC challenged by cytokines. Primary human renal TECs were treated with the cytokine cocktail. (A, B) Western blot of PI3K–Akt pathway, NFκB pathway, and Erk signaling pathway in cells treated with cytokine cocktail. (C) Densitometric quantitation of AktS473, pNFκB65, ErkTh202/Ty204, and pTenS380. All Western blots are representative of two independent experiments. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/34305900>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Theobald D, Braz L, Akula S et al. Inhibition of kinin B1 receptor alleviates SARS-CoV-2 induced long-lasting cardiovascular complications American journal of physiology. Heart and circulatory physiology 2025-03-01 [PMID: 39982452]

Li T, Wang G, Zhao H et al. Estrogen receptor 1 signaling in hepatic stellate cells designates resistance to liver fibrosis Cell discovery 2025-04-15 [PMID: 40234379]

Dooley S, Stubler R, Maity P et al. The molecular motor Myosin 5B and its folding chaperone UNC45A are decreased in colorectal cancer. Cellular and molecular gastroenterology and hepatology 2025-05-21 [PMID: 40409685]

Jafari L, Wiedenroth C, Kriechbaum S et al. Transcriptional changes of the extracellular matrix in chronic thromboembolic pulmonary hypertension govern right ventricle remodeling and recovery. Nature cardiovascular research 2025-07-04 [PMID: 40615581]

Itotagawa E, Tomofuji Y, Kato Y et al. SLE stratification based on BAFF and IFN-I bioactivity for biologics and implications of BAFF produced by glomeruli in lupus nephritis Rheumatology (Oxford) 2023-05-02 [PMID: 36094336]

Lassiter R, Merchen Td, Fang X, Wang Y Protective Role of Kynurenine 3-Monooxygenase in Allograft Rejection and Tubular Injury in Kidney Transplantation Frontiers in immunology 2021-07-07 [PMID: 34305900]

Zhang Y, Recouvreux MV, Jung M et al. Macropinocytosis in Cancer-Associated Fibroblasts Is Dependent on CaMKK2/ARHGEF2 Signaling and Functions to Support Tumor and Stromal Cell Fitness Cancer Discovery 2021-07-01 [PMID: 33653692]

Fu Y, Liu H, Li K et al. C-reactive protein deficiency ameliorates experimental abdominal aortic aneurysms Front Immunol 2023-09-11 [PMID: 37753091]

Kersten, V;Seitz, T;Sommer, J;Thasler, WE;Bosserhoff, A;Hellerbrand, C; Bone Morphogenetic Protein 13 Has Protumorigenic Effects on Hepatocellular Carcinoma Cells In Vitro International journal of molecular sciences 2023-07-04 [PMID: 37446238]

Wu Q, Huang Q, Jiang Y et al. Remodeling Chondroitin-6-Sulfate-Mediated Immune Exclusion Enhances Anti-PD-1 Response in Colorectal Cancer with Microsatellite Stability Cancer Immunology Research 2022-02-01 [PMID: 34933913]

Guan X, Liu D, Zhou H et al. Melatonin improves pregnancy outcomes in adenomyosis mice by restoring endometrial receptivity via NF-κB/apoptosis signaling Annals of Translational Medicine 2022-12-01 [PMID: 36660689]

More HL, Braam B, Cupples WA. Reduced tubuloglomerular feedback activity and absence of its synchronization in a connexin40 knockout rat Frontiers in Network Physiology 2023-08-29 [PMID: 37705697]

More publications at <http://www.novusbio.com/NB300-978>



### 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@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### Products Related to NB300-978

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NBL1-07272	alpha-Smooth Muscle Actin Overexpression Lysate
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF017	Rabbit anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
HAF109	Donkey anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
NB410-28088-1mg	Goat 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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