

# Product Datasheet

## alpha-Smooth Muscle Actin Antibody (4A4) NBP2-22120

Unit Size: 0.1 ml

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

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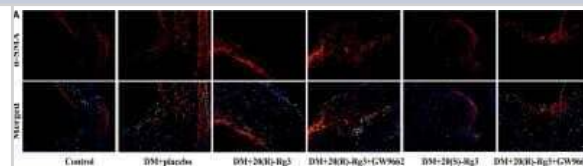


**NBP2-22120****alpha-Smooth Muscle Actin Antibody (4A4)**

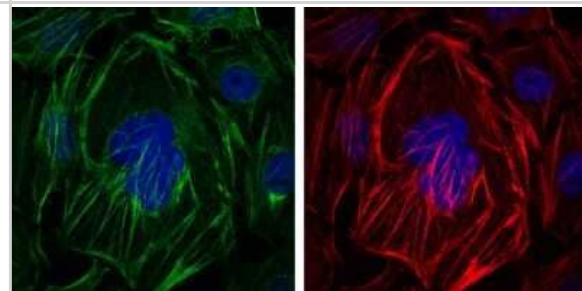
<b>Product Information</b>	
<b>Unit Size</b>	0.1 ml
<b>Concentration</b>	This product is unpurified. The exact concentration of antibody is not quantifiable.
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	4A4
<b>Preservative</b>	0.03% Sodium Azide
<b>Isotype</b>	IgG1
<b>Purity</b>	Ascites
<b>Buffer</b>	Ascites
<b>Target Molecular Weight</b>	42 kDa
<b>Product Description</b>	
<b>Description</b>	Novus Biologicals Mouse alpha-Smooth Muscle Actin Antibody (4A4) (NBP2-22120) is a monoclonal antibody validated for use in IHC, WB, ELISA, Flow and ICC/IF. Anti-alpha-Smooth Muscle Actin Antibody: Cited in 10 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Mouse
<b>Gene ID</b>	59
<b>Gene Symbol</b>	ACTA2
<b>Species</b>	Human, Mouse, Rat, Monkey
<b>Reactivity Notes</b>	Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any questions. Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-questions.
<b>Marker</b>	Mesenchymal Cell Marker
<b>Immunogen</b>	Synthesized peptide of human alpha-Smooth Muscle Actin.
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Immunohistochemistry-Paraffin, ELISA, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen
<b>Recommended Dilutions</b>	Western Blot 1:500 - 1:2000, Flow Cytometry 1:200 - 1:400, ELISA 1:10000, Immunohistochemistry 1:200 - 1:1000, Immunocytochemistry/ Immunofluorescence 1:200 - 1:1000, Immunohistochemistry-Paraffin 1:200 - 1:1000, Immunohistochemistry-Frozen
<b>Application Notes</b>	alpha-Smooth Muscle Actin antibody validated for IHC-Frozen from a verified customer review.

## Images

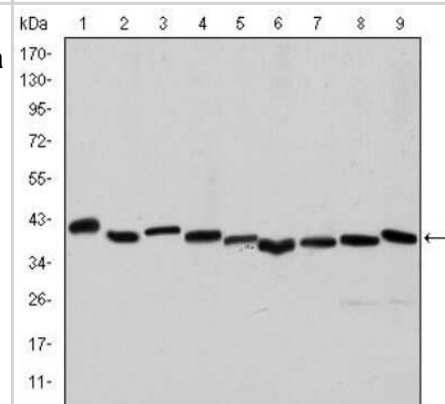
Immunohistochemistry: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Differential effects of the 20(R/S)-Rg3 stereoisomers on proliferation of VSMCs within plaques. A, Co-immunofluorescence staining of the aortic root for VSMCs (anti- $\alpha$ -SMA antibody, red) and proliferation marker PCNA (green) and DAPI (blue) Scale bar: 20  $\mu$ m. Image collected and cropped by CiteAb from the following publication ([onlinelibrary.wiley.com/doi/10.1111/jcmm.13601](https://onlinelibrary.wiley.com/doi/10.1111/jcmm.13601)) licensed under a CC-BY license.



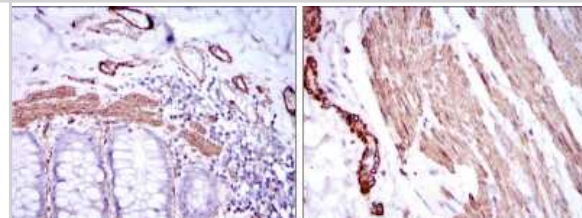
Immunocytochemistry/Immunofluorescence: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Analysis of HepG2 cells using (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Blue: DRAQ5 fluorescent DNA dye.



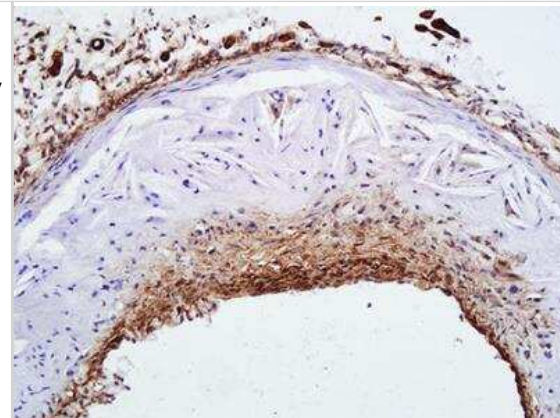
Western Blot: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Analysis using alpha-Smooth Muscle Actin Antibody (4A4) against Hela (1), A431 (2), Jurkat (3), K562 (4), HEK293 (5), HepG2 (6), NIH/3T3 (7), PC-12 (8) and Cos7 (9) cell lysate. The theoretical molecular weight of the antibody is 42 kDa.



Immunohistochemistry-Paraffin: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Analysis of paraffin-embedded human duodenum tissues (left) and human esophagus tissues (right) using alpha-Smooth Muscle Actin Antibody (4A4) with DAB staining.



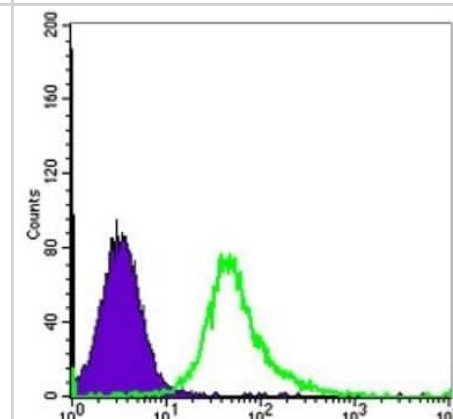
Immunohistochemistry-Frozen: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Representative immunohistochemical alpha-Smooth Muscle Actin staining of mouse aortic sinus. Image submitted by a verified customer review.



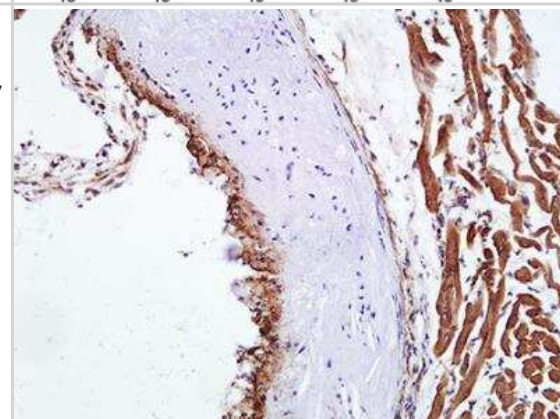
Immunohistochemistry: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Effects of the 20(R/S)-Rg3 stereoisomers on early atherogenesis in diabetic mice. D, F, Representative immunohistochemical a-SMA staining and quantification of the plaque smooth muscle cell content (n = 3). Scale bar: 50 um. Image collected and cropped by CiteAb from the following publication ([onlinelibrary.wiley.com/doi/10.1111/jcmm.13601](https://onlinelibrary.wiley.com/doi/10.1111/jcmm.13601)) licensed under a CC-BY license.



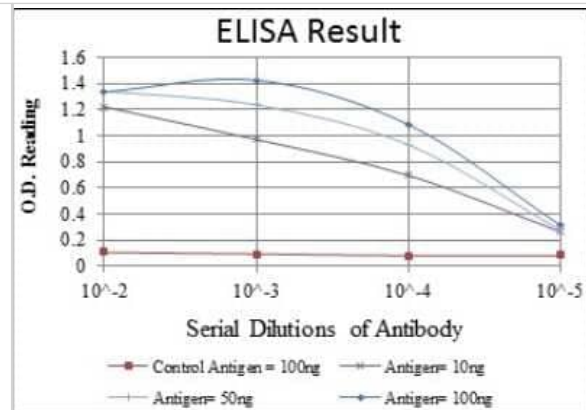
Flow Cytometry: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Analysis of Hela cells using alpha-Smooth Muscle Actin Antibody (4A4) (green) and negative control (purple).



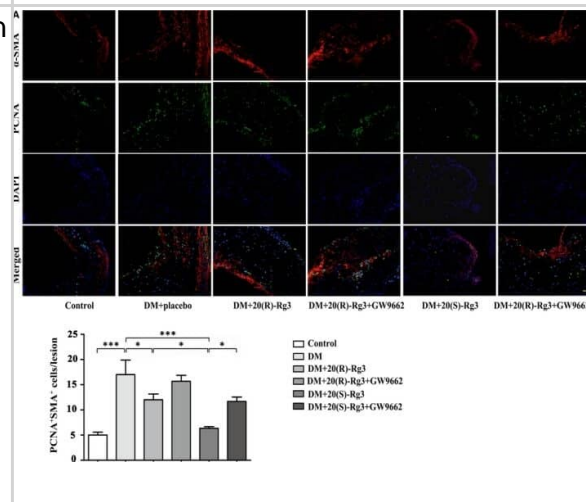
Immunohistochemistry-Frozen: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Representative immunohistochemical alpha-Smooth Muscle Actin staining of mouse aortic sinus. Image submitted by a verified customer review.



ELISA: alpha-Smooth Muscle Actin Antibody (4A4) [NBP2-22120] - Red: Control Antigen (100ng); Purple: Antigen (10ng); Green: Antigen (50ng); Blue: Antigen (100ng);



Immunocytochemistry/ Immunofluorescence: alpha-Smooth Muscle Actin Antibody (4A4) - BSA Free [NBP2-22120] - Differential effects of the 20 (R/S) Rg3 stereoisomers on proliferation of VSMCs within plaques. A, Co-immunofluorescence staining of the aortic root for VSMCs (anti- $\alpha$ -SMA antibody, red) & proliferation marker PCNA (green) & a bar graph summarizing the results (n = 3). Scale bar: 20  $\mu$ m. B, Western blot analysis of cyclin D1, cyclin E & PCNA protein expression within plaques. The bands are quantified by densitometric analysis. Protein expression of cyclin D1 & PCNA was normalized to  $\beta$ -actin, & expression of cyclin E was normalized to GAPDH (n = 3, 4, & 4 for cyclin D1, cyclin E & PCNA, respectively). The results are expressed as the mean values  $\pm$  SEM. \*P < .05, \*\*P < .01, \*\*\*P < .001 Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29566305>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Chakrabarti J, Holokai L, Syu L et al. Hedgehog signaling induces PD-L1 expression and tumor cell proliferation in gastric cancer. *Oncotarget* 2018-12-21 [PMID: 30647844] (Mouse)

Cheng S, Zou Y, Zhang M et al. Single-cell RNA sequencing reveals the heterogeneity and intercellular communication of hepatic stellate cells and macrophages during liver fibrosis *MedComm* (2020) 2023-09-17 [PMID: 37724132] (Mouse)

Chun-Shan Liu, Inmaculada Rioja, Ali Bakr, Marlon R Veldwijk, Elena Sperk, Carsten Herskind, Dieter Weichenhan, Rab K Prinjha, Christoph Plass, Peter Schmezer, Odilia Popanda Selective inhibitors of bromodomain BD1 and BD2 of BET proteins modulate radiation-induced profibrotic fibroblast responses. *International journal of cancer* 2022-07-15 [PMID: 35239184]

Peng L, Jin X, He Q et al. Remodelling landscape of tissue-engineered bladder with porcine small intestine submucosa using single-cell RNA sequencing *Cell proliferation* 2022-09-30 [PMID: 36177893] (IF/IHC, Mouse)

Kamothi DJ, Kant V, Jangir BL et al. Novel preparation of bilirubin-encapsulated pluronic F-127 nanoparticles as a potential biomaterial for wound healing *European journal of pharmacology* 2022-03-15 [PMID: 35151648] (IHC-P, Rat)

Kant V, Jangir BI, Sharma M Et Al. Topical application of quercetin improves wound repair and regeneration in diabetic rats *Immunopharmacology and immunotoxicology* 2021-07-19 [PMID: 34278923]

Choudhary A, Kant V, Jangir BL, Joshi VG Quercetin loaded chitosan tripolyphosphate nanoparticles accelerated cutaneous wound healing in Wistar rats *Eur. J. Pharmacol.* 2020-05-11 [PMID: 32407724] (IF/IHC, Rat)

Zhou P, Zhang X, Guo M et al. Ginsenoside Rb1 ameliorates CKD-associated vascular calcification by inhibiting the Wnt/beta-catenin pathway *J. Cell. Mol. Med.* 2019-08-19 [PMID: 31423730] (WB, Rat)

Jensen T, Wanczyk H, Sharma I et al. Polyurethane scaffolds seeded with autologous cells can regenerate long esophageal gaps: An esophageal atresia treatment model. *J Pediatr Surg.* 2018-10-22 [PMID: 30429066] (ICC/IF)

### Details:

Citation using the Azide and BSA Free form of this antibody.

Guo M, Guo G, Xiao J et al. Ginsenoside Rg3 stereoisomers differentially inhibit vascular smooth muscle cell proliferation and migration in diabetic atherosclerosis. *J Cell Mol Med* 2018-06-01 [PMID: 29566305] (Mouse)





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General: novus@novusbio.com

### **Products Related to NBP2-22120**

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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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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