

Product Datasheet

Hsp47 Antibody (M16.10A1) - BSA Free NBP1-97491-0.05mg

Unit Size: 0.05 mg

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

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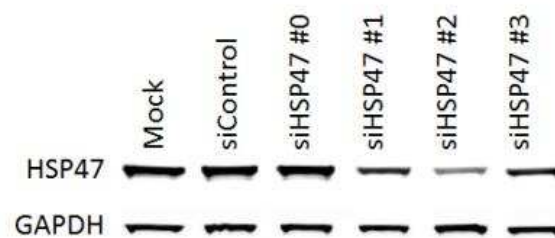
NBP1-97491-0.05mg

Hsp47 Antibody (M16.10A1) - BSA Free

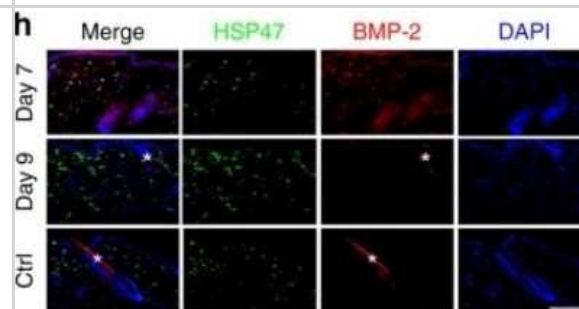
Product Information	
Unit Size	0.05 mg
Concentration	1.0 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	M16.10A1
Preservative	0.09% Sodium Azide
Isotype	IgG2b
Purity	Protein G purified
Buffer	PBS (pH 7.2) and 50% Glycerol
Product Description	
Host	Mouse
Gene ID	871
Gene Symbol	SERPINH1
Species	Human, Mouse, Rat, Porcine, Bovine, Canine, Chicken, Guinea Pig, Hamster, Monkey, Rabbit, Sheep
Reactivity Notes	Recognizes Sheep HSP47. Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-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.
Immunogen	Native rat HSP47.
Product Application Details	
Applications	Western Blot, Simple Western, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Knockdown Validated
Recommended Dilutions	Western Blot 1:1000, Simple Western 1:100, Flow Cytometry 1:10-1:1000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:50, Immunohistochemistry-Frozen 1:10-1:500, Knockdown Validated
Application Notes	<p>This antibody is useful in IHC and detects a band of ~47kDa by WB. Immunoprecipitation, Flow Cytometry and ICC/IF were reported in scientific literature.</p> <p>In Simple Western only 10 - 15 uL of the recommended dilution is used per data point.</p> <p>See Simple Western Antibody Database for Simple Western validation: Tested in NIH-3T3 lysate, separated by Size, antibody dilution of 1:100, apparent MW was 57 kDa.</p>

Images

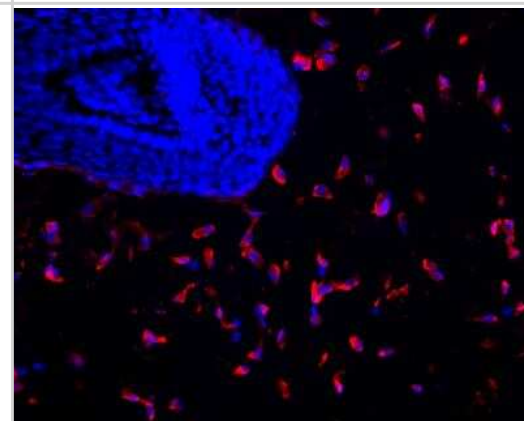
Western Blot: Hsp47 Antibody (M16.10A1) [NBP1-97491] - analysis of Hsp47 in NIH/3T3 cell lysate (20ug/lane) using anti-Hsp47 antibody. 5x10⁴ NIH/3T3 cells were seeded in 6-well plate and transfected with 50nM of HSP47 siRNA the following day. Total protein was harvested 72h after transfection. Image from verified customer review.



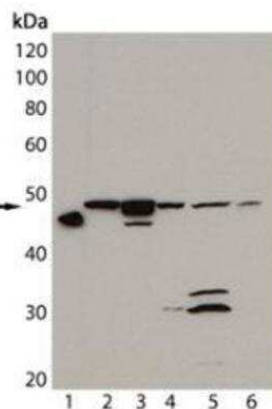
Immunocytochemistry/Immunofluorescence: Hsp47 Antibody (M16.10A1) [NBP1-97491] - WNT and BMP signaling pathways play crucial roles in regeneration. a-d Real-time PCR for WNT and BMP signals, including Wnt7b Dual immunostaining for K15 and phospho-Smad1/5 (pSmad1/5) revealed the nuclear staining of pSmad1/5 in hair stem cells at day 7 when skin was stretched (arrow). Scale bar=?50? um. h, i Immunostaining and confocal microscope. Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/s41467-019-09402-8>) licensed under a CC-BY license.



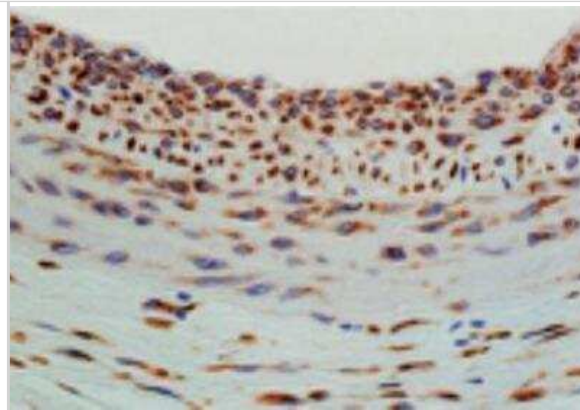
Immunohistochemistry-Frozen: Hsp47 Antibody (M16.10A1) [NBP1-97491] - Hsp47 antibody in guinea pig skin (subdermis). Image from verified customer review.



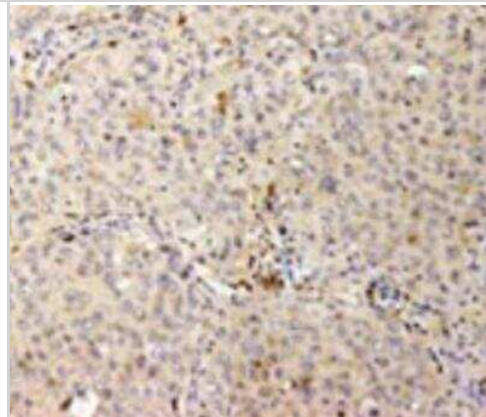
Western Blot: Hsp47 Antibody (M16.10A1) [NBP1-97491] - Analysis of HSP47, mAb (M16.10A1): Lane 1: Rat recombinant HSP47; Lane 2: Rat-2 (heat shocked); Lane 3: L929 (heat shocked); Lane 4: 3T3 (heat shocked); Lane 5: CHO (heat shocked); Lane 6: HeLa (heat shocked).



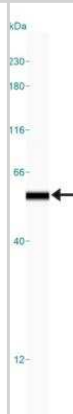
Immunohistochemistry-Paraffin: Hsp47 Antibody (M16.10A1) [NBP1-97491] - Analysis of paraffin-embedded tissue section of rat carotid artery 14 days after balloon-injury to the artery, stained using Hsp47 (Colligin) mAb (M16.10A1).



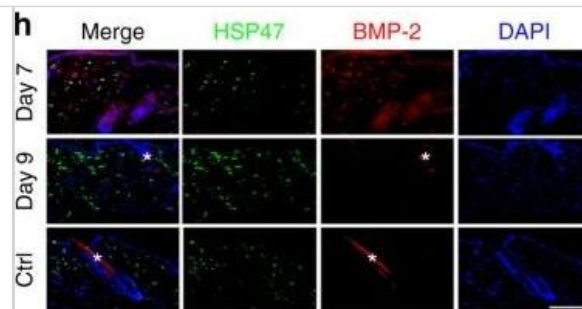
Immunohistochemistry-Paraffin: Hsp47 Antibody (M16.10A1) [NBP1-97491] - Analysis of human breast cancer tissue immunohistochemically stained using Hsp47 mAb (M16.10A1).



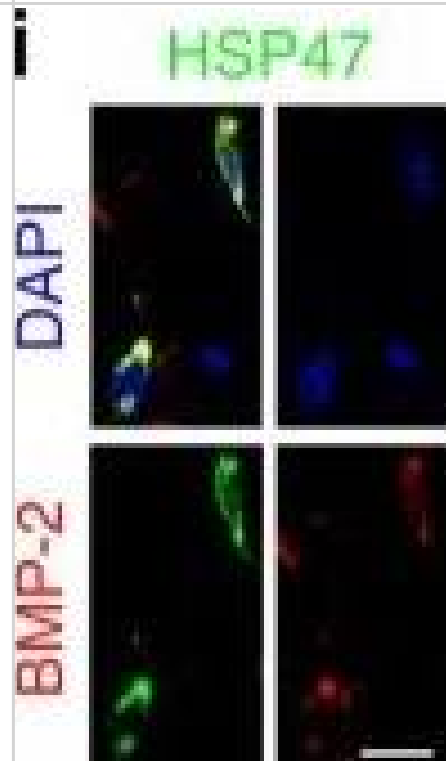
Simple Western: Hsp47 Antibody (M16.10A1) [NBP1-97491] - Simple Western lane view shows a specific band for Hsp47 in 0.5 mg/ml of NIH-3T3 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Immunocytochemistry/ Immunofluorescence: Hsp47 Antibody (M16.10A1) [NBP1-97491] - WNT & BMP signaling pathways play crucial roles in regeneration. a–d Real-time PCR for WNT & BMP signals, including Wnt7b (a), Wnt10a (b), Lef1 (c), & Bmp2 (d) in response to stretch (day 1 & day 7) & release of stretch (day 9); n = 6 for each group. e Schematic of hair cycle activator & inhibitor in response to strain alteration. f Dual immunostaining for K15 & β -catenin revealed nuclear staining of β -catenin in hair follicles at day 9 & day 14 when stretch was released. Scale bar = 50 μ m. g Dual immunostaining for K15 & phospho-Smad1/5 (pSmad1/5) revealed the nuclear staining of pSmad1/5 in hair stem cells at day 7 when skin was stretched (arrow). Scale bar = 50 μ m. h, i Immunostaining (h) & confocal microscope (i) revealed co-localization of HSP47 & BMP-2 signals at day 7 when skin was stretched. Scale bar = 100 μ m (h) or 10 μ m (i). j, k Immunostaining (j) & confocal microscope (k) revealed co-localization of Perilipin-1 & BMP-2 signals at day 7 when skin was stretched. Scale bar = 100 μ m (j) or 10 μ m (k). Statistical significance was determined using ANOVA followed by a Bonferroni post hoc test. Data are presented as means \pm SEM. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. Source data are provided as a Source Data file. *Autofluorescence of hair shafts in g, h Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30944305>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunocytochemistry/ Immunofluorescence: Hsp47 Antibody (M16.10A1) [NBP1-97491] - WNT & BMP signaling pathways play crucial roles in regeneration. a–d Real-time PCR for WNT & BMP signals, including Wnt7b (a), Wnt10a (b), Lef1 (c), & Bmp2 (d) in response to stretch (day 1 & day 7) & release of stretch (day 9); n = 6 for each group. e Schematic of hair cycle activator & inhibitor in response to strain alteration. f Dual immunostaining for K15 & β -catenin revealed nuclear staining of β -catenin in hair follicles at day 9 & day 14 when stretch was released. Scale bar = 50 μ m. g Dual immunostaining for K15 & phospho-Smad1/5 (pSmad1/5) revealed the nuclear staining of pSmad1/5 in hair stem cells at day 7 when skin was stretched (arrow). Scale bar = 50 μ m. h, i Immunostaining (h) & confocal microscope (i) revealed co-localization of HSP47 & BMP-2 signals at day 7 when skin was stretched. Scale bar = 100 μ m (h) or 10 μ m (i). j, k Immunostaining (j) & confocal microscope (k) revealed co-localization of Perilipin-1 & BMP-2 signals at day 7 when skin was stretched. Scale bar = 100 μ m (j) or 10 μ m (k). Statistical significance was determined using ANOVA followed by a Bonferroni post hoc test. Data are presented as means \pm SEM. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. Source data are provided as a Source Data file. *Autofluorescence of hair shafts in g, h Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30944305>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Gan, C;Yaqoob, U;Lu, J;Xie, M;Anwar, AA;Jalan-Sakrikar, N;Jerez, S;Sehrawat, T;Navarro-Corcuera, A;Kostallari, E;Habash, NW;Cao, S;Shah, VH; Liver Sinusoidal Endothelial Cells Contribute to Portal Hypertension Through Collagen Type IV-Driven Sinusoidal Remodeling JCI insight 2024-05-07 [PMID: 38713515]

Xuexiang Han, Ningqiang Gong, Lulu Xue, Margaret M. Billingsley, Rakan El-Mayta, Sarah J. Shepherd, Mohamad-Gabriel Alameh, Drew Weissman, Michael J. Mitchell Ligand-tethered lipid nanoparticles for targeted RNA delivery to treat liver fibrosis Nature Communications 2023-01-17 [PMID: 36650129]

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Sun X, Chen C, Liu H, Tang S High glucose induces HSP47 expression and promotes the secretion of inflammatory factors through the IRE1 alpha /XBP1/HIF-1 alpha pathway in retinal Muller cells Experimental and therapeutic medicine 2021-12-01 [PMID: 34676004] (IP, WB, Mouse)

Kim SH, Kim B, Kim JH Et al. L-myc Gene Expression in Canine Fetal Fibroblasts Promotes Self-Renewal Capacity but Not Tumor Formation Cells 2021-08-04 [PMID: 34440750] (ICC/IF)

Marom R, Burrage LC, Venditti R Et al. COPB2 loss of function causes a coatopathy with osteoporosis and developmental delay American journal of human genetics 2021-08-24 [PMID: 34450031]

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Chu, SY;Chou, CH;Huang, HD;Yen, MH;Hong, HC;Chao, PH;Wang, YH;Chen, PY;Nian, SX;Chen, YR;Liou, LY;Liu, YC;Chen, HM;Lin, FM;Chang, YT;Chen, CC;Lee, OK; Mechanical stretch induces hair regeneration through the alternative activation of macrophages Nat Commun 2019-04-03 [PMID: 30944305] (ICC/IF, Mouse)

A Furusu et al. Renoprotective Effect of Azelnidipine in Rats. Biol. Pharm. Bull. 31, 2237 . 2008-01-01 [PMID: 19043206] (IF/IHC, Rat)

D Li et al. Novel Adenoviral Gene Delivery System Targeted Against Head and NeckCancer. Laryngoscope 118, 650 . 2008-01-01 [PMID: 18176343] (FLOW, ICC/IF, Human)

Y Ogawa et al. Role of heat shock protein 47, a collagen-binding chaperone, in lacrimal gland pathology in patients with cGVHD. Invest. Ophthalmol. Vis. Sci. 48, 1079 . 2007-01-01 [PMID: 17325149] (WB, IF/IHC, ICC/IF, Human)

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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

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NBP1-88172PEP	Hsp47 Recombinant Protein Antigen

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