

Product Datasheet

GLI-1 Antibody - BSA Free NB600-600

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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NB600-600

GLI-1 Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
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	Immunogen affinity purified
Buffer	PBS

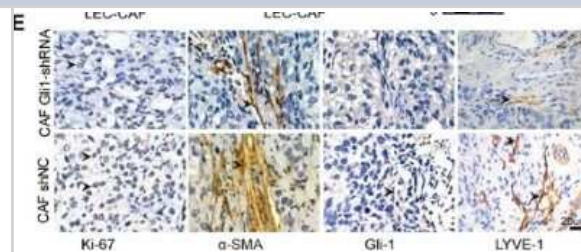
Product Description	
Description	Novus Biologicals Rabbit GLI-1 Antibody - BSA Free (NB600-600) is a polyclonal antibody validated for use in IHC, WB, ELISA, Flow, ICC/IF and ChIP. Anti-GLI-1 Antibody: Cited in 55 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	2735
Gene Symbol	GLI1
Species	Human, Mouse, Canine
Reactivity Notes	Canine reactivity reported from a verified customer review.
Specificity/Sensitivity	No reaction occurs with human or mouse Gli2 or Gli3.
Immunogen	A synthetic peptide made toward the C-terminus portion of the human GLI-1 protein (between residues 800-850) [Uniprot: P08151]

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, ELISA, Flow (Intracellular), Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Chromatin Immunoprecipitation (ChIP), Knockdown Validated
Recommended Dilutions	Western Blot 1 - 2 ug/ml, ELISA 1:500 - 1:2000, Immunohistochemistry 1:200, Immunocytochemistry/ Immunofluorescence 1 ug/ml, Immunohistochemistry-Paraffin 1:200, Immunoblotting 1 - 2 ug/ml, Flow (Intracellular) 1-2 ug/million cells, Chromatin Immunoprecipitation (ChIP) 1:10-1:500, Knockdown Validated
Application Notes	Use in ICC/IF reported in scientific literature (PMID:35226587) Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. Flow was reported in a customer review. IHC-P reported from a verified customer review. Use in immunoblotting reported in scientific literature (PMID: 28167297). Use in FLOW reported in scientific literature (PMID: 26238488)..

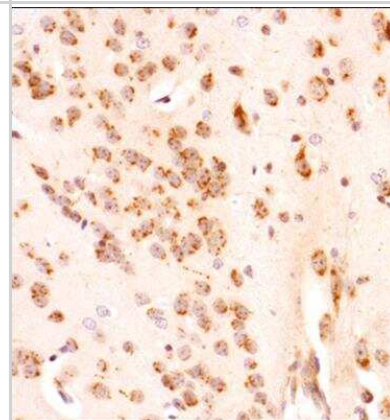


Images

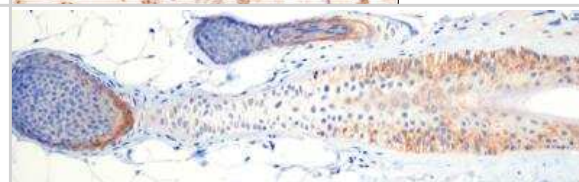
Immunohistochemistry: GLI-1 Antibody - BSA Free [NB600-600] - GLI-1 Antibody [NB600-600] - Inhibition of Hh signaling in CAFs blocks its effects on lymphangiogenesis in vivo and in vitro. (E) IHC staining for Ki-67, -SMA, Gli-1 and LYVE1 in tumour sections from mice in the two groups. Human CAFs promote lymphangiogenesis in ovarian cancer via the Hh-VEGF-C signaling axis. Image collected and cropped by CiteAb from the following publication ([//pubmed.ncbi.nlm.nih.gov/31012844/](https://pubmed.ncbi.nlm.nih.gov/31012844/)) licensed under a CC-BY license.



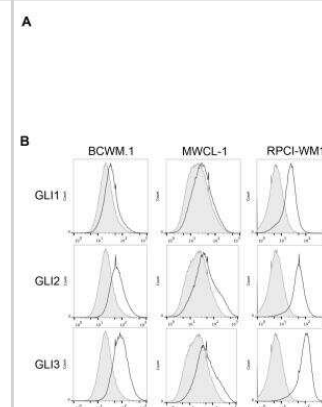
Immunohistochemistry-Paraffin: GLI-1 Antibody [NB600-600] - Analysis of a FFPE mouse brain section using GLI-1 antibody at 1:600 dilution.



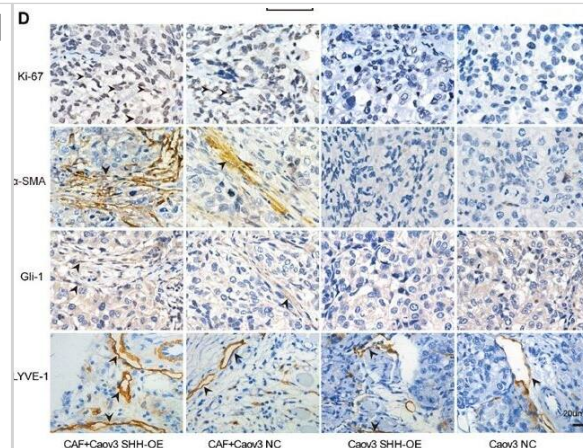
Immunohistochemistry-Paraffin: GLI-1 Antibody [NB600-600] - Staining in canine hair follicle. Image from a verified customer review.



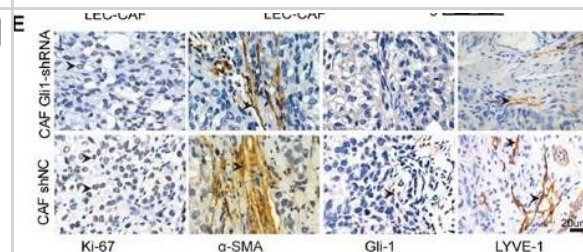
Flow (Intracellular): GLI-1 Antibody [NB600-600] - Staining for GLI-1 in untreated human B cell lines (BCWM.1, MWCL-1 and RPCI-WM1) using anti-GLI-1 antibody. Rabbit IgG Isotype Control (Cat# NBP2-36463) was used as a negative control. Image courtesy of Sherine Elswa, Northern Illinois University.



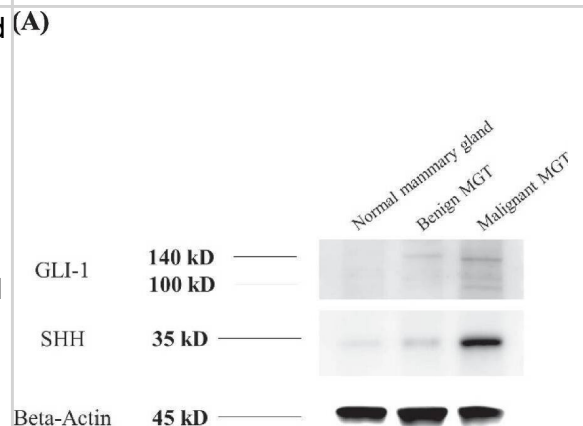
Immunohistochemistry-Paraffin: GLI-1 Antibody - BSA Free [NB600-600]
 - Paracrine signaling of tumour-derived SHH in CAFs promotes lymphangiogenesis in vivo (A) Growth properties of subcutaneous tumours in mice derived from Caov3 SHH-OE or Caov3 NC cells alone or co-injected with CAFs. Kaplan-Meier plot of time to tumour progression, as evidenced by survival rates over time (n=5). (B) Bright field images of subcutaneous tumours from each group (n=5) 20 days after tumour implantation. (C) Graphical representation of the weights of subcutaneous tumours from each group 20 days after tumour implantation. (D) Immunohistochemical staining for Ki-67, α -SMA, Gli-1 & LYVE1 in tumour sections from mice in each group. (E) Graphical representation of the number of LYVE1+ vessels counted from IHC images in panel D. (*P<0.05, **P<0.01, ***P<0.001). Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.18621>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunohistochemistry-Paraffin: GLI-1 Antibody - BSA Free [NB600-600]
 - Inhibition of Hh signaling in CAFs blocks its effects on lymphangiogenesis in vivo & in vitro (A) Representative images & statistical analyses of migration of LECs in a co-culture invasion system with CAFs stably transfected with shNC or Gli-shRNA lentivirus in the presence of rSHH (1 μ g/ml). (B) Representative images & statistical analyses of capillary tube formation of LECs treated with supernatants from cultures of CAFs stably transfected with shNC or Gli-shRNA lentivirus in the presence of rSHH (1 μ g/ml). (C) Bright field images & graphical representation of the weights of tumours of subcutaneous tumours from mice (n=5) bearing Caov3 SHH-OE cells co-injected with CAFs stably transfected with shNC or Gli-shRNA lentivirus 20 days after tumour implantation. (D) Growth properties of subcutaneous tumours in mice derived from Caov3 SHH-OE cells co-injected with CAFs stably transfected with shNC or Gli-shRNA lentivirus. Kaplan-Meier plot of time to tumour progression, as evidenced by survival rates over time. (E) IHC staining for Ki-67, α -SMA, Gli-1 & LYVE1 in tumour sections from mice in the two groups. (F) Graphical representation of the number of LYVE1+ vessels counted from IHC images in panel E. (**P<0.01, ***P<0.001). Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.18621>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Comparison of SHH and GLI-1 expression in the normal mammary gland and MGT tissues. A For western blotting, the blots were cut prior to hybridisation with antibodies. SHH (35 kDa) and GLI-1 (100–140 kDa) protein levels in the normal mammary gland and benign and malignant mammary gland tissues. Beta-actin was used as the loading control. **B** Relative quantitation of SHH and (C) GLI-1 proteins were normalized to that of the control group. The mean and standard error of the mean are used to express quantitative data. (*, **, #: p < .05). SHH, sonic hedgehog; GLI-1, glioma-associated oncogene 1; MGT, mammary gland tumour Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/37932728>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Paradise BD, Gainullin VG, Almada LL et al. SUFU promotes GLI activity in a Hedgehog-independent manner in pancreatic cancer *The Biochemical journal* 2023-08-16 [PMID: 37477952]

Liu Y, Liu S, Song Z et al. GLI1 Deficiency Impairs the Tendon-Bone Healing after Anterior Cruciate Ligament Reconstruction: In Vivo Study Using Gli1-Transgenic Mice *Journal of Clinical Medicine* 2023-01-28 [PMID: 36769647] (Chemotaxis, Western Blot, Human)

Hasselluhn, MC;Decker-Farrell, AR;Vlahos, L;Thomas, DH;Curiel-Garcia, A;Maurer, HC;Wasko, UN;Tomassoni, L;Sastra, SA;Palermo, CF;Dalton, TC;Ma, A;Li, F;Tolosa, EJ;Hibshoosh, H;Fernandez-Zapico, ME;Muir, A;Califano, A;Olive, KP; Tumor Explants Elucidate a Cascade of Paracrine SHH, WNT, and VEGF Signals Driving Pancreatic Cancer Angiosuppression *Cancer discovery* 2023-11-15 [PMID: 37966260]

Angelini A, Ortiz-Urbina J, Trial J, Reddy AK et Al. Sex-specific phenotypes in the aging mouse heart and consequences for chronic fibrosis *Am J Physiol Heart Circ Physiol* 2022-06-17 [PMID: 35714177]

Qian Wang, Shengnan Jia, Ding Wang, Xuyang Chen, Dhan V Kalvakolanu, Hongwu Zheng, Xiaodong Wei, Naiyan Wen, Hang Liang, Baofeng Guo, Ling Zhang A Combination of BRD4 and HDAC3 Inhibitors Synergistically Suppresses Glioma Stem Cell Growth by Blocking GLI1/IL6/STAT3 Signaling Axis. *Molecular cancer therapeutics* 2021-08-12 [PMID: 32999044]

Matko Leović, Antonija Jakovčević, Ivan Mumlek, Irena Zagorac, Maja Sabol, Dinko Leović, Marko Tarle A Pilot Immunohistochemical Study Identifies Hedgehog Pathway Expression in Sinonasal Adenocarcinoma *International Journal of Molecular Sciences* 2024-04-24 [PMID: 38731849]

Bo Ram Kim, Dae Yeong Kim, Na Ly Tran, Bu Gyeom Kim, Sun Il Lee, Sang Hee Kang, Byung Yook Min, Wooyoung Hur, Sang Cheul Oh Daunorubicin induces GLI1-dependent apoptosis in colorectal cancer cell lines *International Journal of Oncology* 2024-06-01 [PMID: 38757343]

Hong Zhou, Qun Zhang, Chenyang Liu, Jiahao Fan, Wen Huang, Nan Li, Mingxia Yang, Hong Wang, Weiping Xie, Hui Kong NLRP3 inflammasome mediates abnormal epithelial regeneration and distal lung remodeling in silica-induced lung fibrosis *International Journal of Molecular Medicine* 2024-03-01 [PMID: 38240085]

Evelyn Susanto, Ana Marin Navarro, Leilei Zhou, Anders Sundström, Niek van Bree, Marina Stantic, Mohsen Moslem, Jignesh Tailor, Jonne Rietdijk, Veronica Zubillaga, Jens-Martin Hübner, Holger Weishaupt, Johanna Wolfsberger, Irina Alafuzoff, Ann Nordgren, Thierry Magnaldo, Peter Siesjö, John Inge Johnsen, Marcel Kool, Kristiina Tammimies, Anna Darabi, Fredrik J. Swartling, Anna Falk, Margareta Wilhelm Modeling SHH-driven medulloblastoma with patient iPS cell-derived neural stem cells *Proceedings of the National Academy of Sciences of the United States of America* 2020-08-18 [PMID: 32747535]

Koo H, Lee S, Kim WH Usability of serum hedgehog signalling proteins as biomarkers in canine mammary carcinomas *BMC veterinary research* 2023-11-06 [PMID: 37932728] (WB, Canine)

Wang M, Huang W FOXS1 promotes prostate cancer progression through the Hedgehog/Gli1 pathway *Biochemical pharmacology* 2023-10-27 [PMID: 37890593]

Orzechowska-Licari EJ, Bialkowska AB, Yang VW Sonic Hedgehog and WNT signaling regulate a positive feedback loop between intestinal epithelial and stromal cells to promote epithelial regeneration *Cellular and molecular gastroenterology and hepatology* 2023-07-20 [PMID: 37481204] (WB, Mouse)

Details:

1:400 WB dilution

More publications at <http://www.novusbio.com/NB600-600>

Procedures

Western Blot protocol specific for Gli1 antibody (NB600-600)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions.

****Note:** Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

Immunohistochemistry-Paraffin protocol for GLI-1 Antibody (NB600-600)

Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:

Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes.

Staining:

1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.



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Products Related to NB600-600

NBL1-11109	GLI-1 Overexpression Lysate
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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