

# Product Datasheet

## Nanog Antibody (5A10) - BSA Free NBP1-04320

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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**NBP1-04320**

Nanog Antibody (5A10) - BSA Free

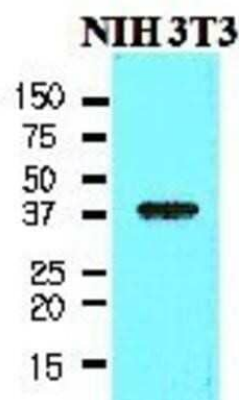
Product Information	
<b>Unit Size</b>	0.1 ml
<b>Concentration</b>	1.0 mg/ml
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	5A10
<b>Preservative</b>	0.02% Sodium Azide
<b>Isotype</b>	IgG2a Kappa
<b>Purity</b>	Protein G purified
<b>Buffer</b>	PBS (pH 7.4), 10% Glycerol
<b>Target Molecular Weight</b>	35 kDa

Product Description	
<b>Description</b>	Novus Biologicals Mouse Nanog Antibody (5A10) - BSA Free (NBP1-04320) is a monoclonal antibody validated for use in IHC, WB, ELISA and Flow. Anti-Nanog Antibody: Cited in 6 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Mouse
<b>Gene ID</b>	79923
<b>Gene Symbol</b>	NANOG
<b>Species</b>	Human
<b>Marker</b>	Embryonic Stem Cell Marker
<b>Immunogen</b>	Recombinant human Nanog (1-154aa) purified from E. coli (NP_079141).

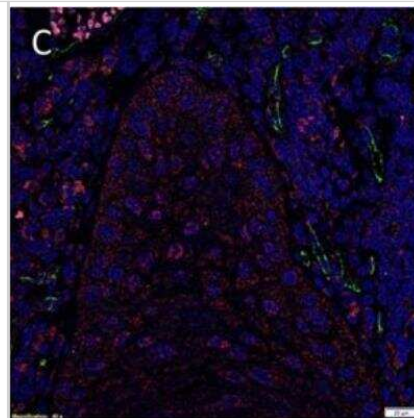
Product Application Details	
<b>Applications</b>	Western Blot, Immunohistochemistry-Paraffin, ELISA, Flow Cytometry, Immunohistochemistry
<b>Recommended Dilutions</b>	Western Blot 1:500-1:1000, Flow Cytometry, ELISA 1:100-1:2000, Immunohistochemistry 1:10-1:500, Immunohistochemistry-Paraffin 1:50-1:100

**Images**

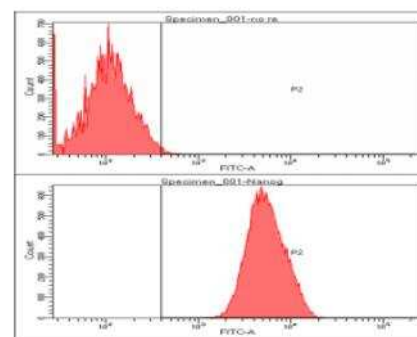
Western Blot: Nanog Antibody (5A10) [NBP1-04320] - The cell lysates of NIH3T3 (35ug) were resolved by SDS-PAGE, transferred to NC membrane and probed with anti-human Nanog (1:500). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.



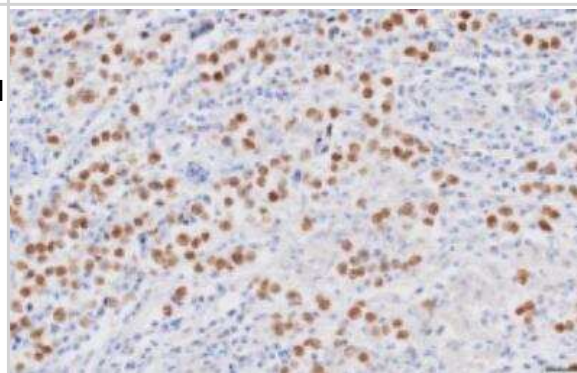
Immunohistochemistry: Nanog Antibody (5A10) [NBP1-04320] - Nuclear expression of NANOG [(C), red] was demonstrated on the endothelium of the microvessels which expressed CD34 [(C), green] within stroma. The NANOG+ cells [(C), red] that do not express CD34 were seen within the tumor nests and the stroma. Image collected and cropped by CiteAb from the following publication ([journal.frontiersin.org/article/10.3389/fsurg.2016.00046](http://journal.frontiersin.org/article/10.3389/fsurg.2016.00046)), licensed under a CC-BY license.



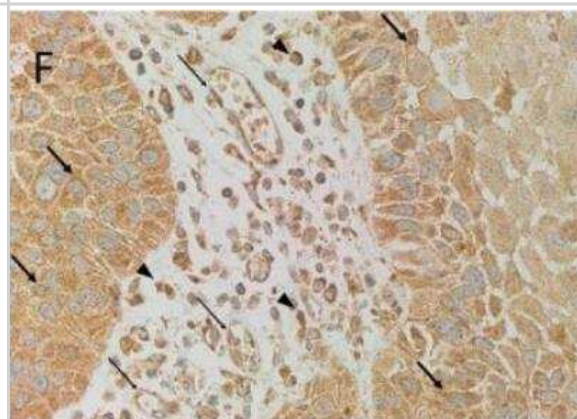
Flow Cytometry: Nanog Antibody (5A10) [NBP1-04320] - Flow cytometry analysis of Nanog in Hep3B cell line, staining at 2-5ug for 1x10<sup>6</sup> cells. The secondary antibody used goat anti-mouse IgG Alexa fluor 488 conjugate.



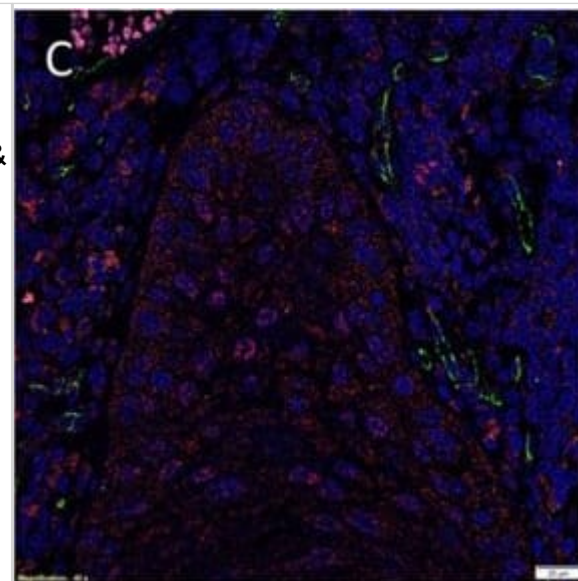
Immunohistochemistry-Paraffin: Nanog Antibody (5A10) [NBP1-04320] - Human seminoma tissue were incubated with anti-human Nanog (1:50) for 2 hours at room temperature. Antigen retrieval was performed in 0.1M sodium citrate buffer and detected using Diaminobenzidine (DAB)



Immunohistochemistry: Nanog Antibody (5A10) [NBP1-04320] - NANOG was seen in cells within the tumor nests [(F), brown, thick arrows] and the stroma [(F), brown, arrowheads], and the endothelium of the microvessels within the stroma [(F), brown, thin arrows]. Image collected and cropped by CiteAb from the following publication ([journal.frontiersin.org/article/10.3389/fsurg.2016.00046](http://journal.frontiersin.org/article/10.3389/fsurg.2016.00046)), licensed under a CC-BY license.



Immunocytochemistry/ Immunofluorescence: Nanog Antibody (5A10) - BSA Free [NBP1-04320] - Representative IF IHC-stained sections of MDBMSCC demonstrating the expression of pSTAT3 [(A), red] & EMA [(A), green] by cells within the tumor nests. There was a CSC subpopulation remonstrating nuclear co-expression of STAT3 [(B), red] & CD34 [(B), green], appearing as orange, on the endothelium of the microvessels within the stroma; & another subpopulation staining only positively for pSTAT3 within the stroma [(B), red]. Nuclear expression of NANOG [(C), red] was demonstrated on the endothelium of the microvessels which expressed CD34 [(C), green] within stroma. The NANOG+ cells [(C), red] that do not express CD34 were seen within the tumor nests & the stroma. SOX2 [(D), red] was also expressed by cells within tumor nests & the stroma, & the endothelium of the microvessels expressing CD34 [(D), green]. Nuclear expression of both SOX2 [(E), red] & SALL4 [(E), green], appearing as orange, was seen on the cells within the tumor nests & the stroma. Expression of both SOX2 [(F), red] & OCT4 [(F), green], appearing as orange, was seen on cells within the tumor nests & the stroma, & the endothelium of the microvessels within the stroma. pSTAT3 [(G), red] & membranous staining CD44 [(G), green] were co-expressed by cells within the tumor nests. Scale bars: 20  $\mu$ m. Image collected & cropped by CiteAb from the following publication (<http://journal.frontiersin.org/Article/10.3389/fsurg.2016.00046/abstract>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Yadav A, Kumar B, Teknos TN, Kumar P. Bazedoxifene enhances the anti-tumor effects of cisplatin and radiation treatment by blocking IL-6 signaling in head and neck cancer. *Oncotarget*. [PMID: 28978005] (WB, Human)

Gong W, Sun B, Sun H et al. Nodal signaling activates the Smad2/3 pathway to regulate stem cell-like properties in breast cancer cells. *Am J Cancer Res*. 2017-04-12 [PMID: 28401007] (WB, Human)

Koh SP, On N, Brasch HD et al. Embryonic Stem Cell-like Population in Dupuytren's Disease. *Plast Reconstr Surg Glob Open*. 2016-11-01 [PMID: 27975007] (IF/IHC, Human)

Yu HH, Featherston T, Tan ST et al. Characterization of Cancer Stem Cells in Moderately Differentiated Buccal Mucosal Squamous Cell Carcinoma. *Front Surg*. 2016-08-17 [PMID: 27532037] (IF/IHC, Human)

Kumar B, Yadav A, Lang JC et al. Suberoylanilide hydroxamic acid (SAHA) reverses chemoresistance in head and neck cancer cells by targeting cancer stem cells via the downregulation of nanog. *Genes Cancer*. 2015-03-01 [PMID: 26000099] (WB, Human)

### Details:

Nanog antibody was used for WB application on lysates of human head and neck squamous cell carcinoma cell line CAL27 and UD-SCC-2 cell line as well as their cisplatin-resistant variants namely CAL27-CisR and UD-SCC-2-CisR respectively (Figure 3E-F). WB also performed on CAL27-CisR and UD-SCC-2-CisR cell that were subjected or not to HDAC1 / HDAC2 knocked down using siRNA (Figure 4A-B), and on CAL27-CisR and UD-SCC-2-CisR cells treated or not with Suberoylanilide Hydroxamic Acid /SAHA, an HDAC inhibitor (Figure 6C-D).

Lin F, Prichard J, Bitting AK et al. Geisinger Immunohistochemical Antibodies and Staining Protocols Handbook of Practical Immunohistochemistry. 2015-01-01 (IHC-P, Human)

Moretti A, Bellin M, Jung CB et al. Mouse and human induced pluripotent stem cells as a source for multipotent Isl1+ cardiovascular progenitors. *FASEB J* 2009-01-01 [PMID: 19850773]



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### **Products Related to NBP1-04320**

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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]
NBP1-96981-0.5mg	Mouse IgG2a Kappa Isotype Control (M2AK)

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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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