

Product Datasheet

Nanog Antibody - BSA Free

NB100-588

Unit Size: 100 ul

Store at 4C. Do not freeze.

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NB100-588

Nanog Antibody - BSA Free

Product Information

Unit Size	100 ul
Concentration	1.0 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris-Citrate/Phosphate (pH 7.0 - 8.0)

Product Description

Host	Rabbit
Gene ID	79923
Gene Symbol	NANOG
Species	Human, Mouse
Reactivity Notes	Human reactivity reported in (PMID: 28228260), Customer review.
Marker	Embryonic Stem Cell Marker
Immunogen	A synthetic peptide which maps to a region between residues 250 and the C-terminus (residue 305) of mouse Nanog homeobox using the numbering given in TrEMBL entry Q80Z64 (GeneID 71950).

Product Application Details

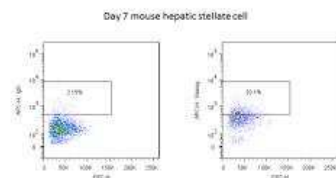
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation
Recommended Dilutions	Western Blot 1:2000-1:10000, Flow Cytometry 1:150, Immunocytochemistry/ Immunofluorescence 1:10-1:2000, Immunoprecipitation 2-5 ug/mg lysate
Application Notes	WB from a verified customer review, PMID (28228260). ICC/IF reported in (PMID: 22505032). Nanog antibody validated for FLOW from a verified customer review.

Images

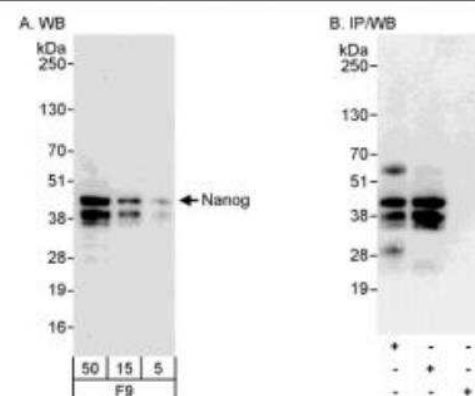
Western Blot: Nanog Antibody [NB100-588] - ZNF217 and ALKBH5 regulate NANOG and KLF4 expression via modulation of m6A levels. MCF-7 subclones were exposed to 20% or 1% O₂ for 48 h and immunoblot assays were performed. H. MCF-7 subclones were exposed to 20% or 1% O₂ for 48 h. The percentage of m6A+ KLF4 mRNA was determined. *P < 0.05, **P < 0.01 vs. NTC at 20% O₂; ###P < 0.01 vs. NTC at 1% O₂ by two-way ANOVA. Image collected and cropped by CiteAb from the following publication (<https://www.oncotarget.com/fulltext/11743>), licensed under a CC-BY license.



Flow Cytometry: Nanog Antibody [NB100-588] - FACS analysis of Nanog expression in primary mouse hepatic stellate cell cultured for 7 days. Image from verified customer review.



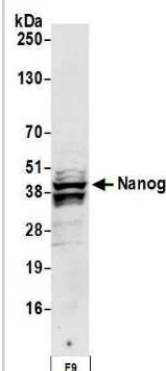
Western Blot: Nanog Antibody [NB100-588] - Detection of Mouse Nanog by Western Blot and Immunoprecipitation.



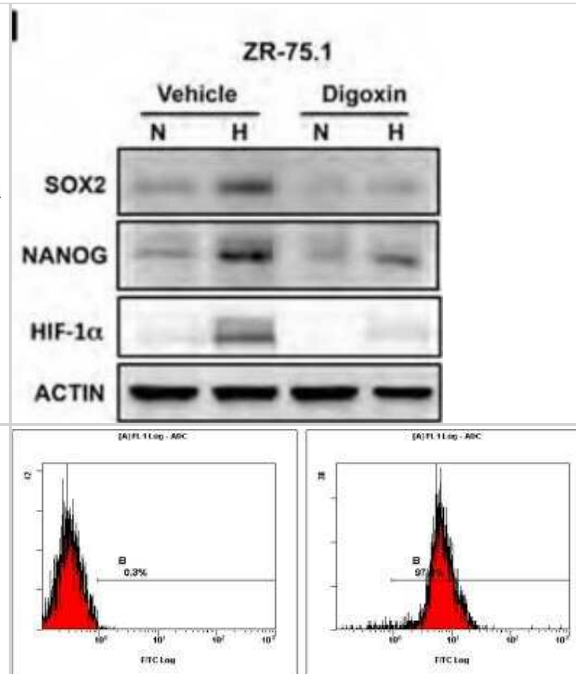
Western Blot: Nanog Antibody [NB100-588] - The expression of pluripotency factor Nanog in human head and neck cancer cell lines cell lines FaDu and HN5. WB from a verified customer review.



Western Blot: Nanog Antibody [NB100-588] - Detection of mouse Nanog by western blot. Samples: Whole cell lysate (50 ug) from F9 cells prepared using NETN lysis buffer. Antibody: Affinity purified rabbit anti-Nanog antibody NB100-588 used for WB at 0.1 ug/ml. Detection: Chemiluminescence with an exposure time of 30 seconds.

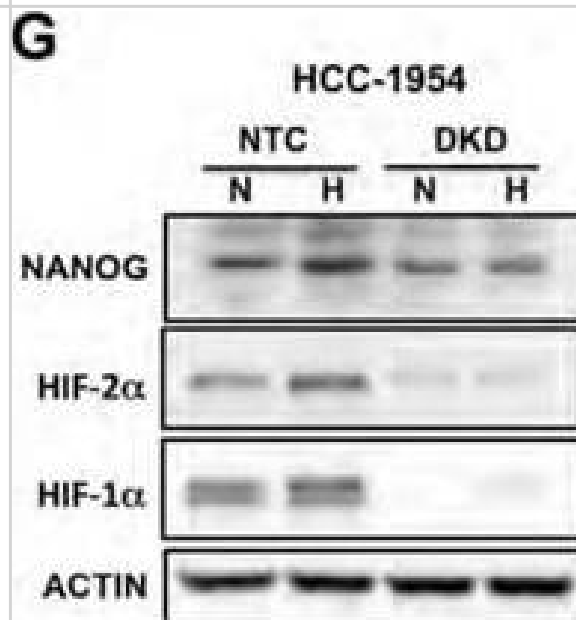


Western Blot: Nanog Antibody [NB100-588] - HIFs are required for hypoxia-induced expression of pluripotency factors. ZR75.1 cells were treated with vehicle or digoxin (200 nM), exposed to 20% or 1% O₂ for 48 h, and HIF-1α, NANOG and SOX2 immunoblot assays were performed. Image collected and cropped by CiteAb from the following publication (<https://www.oncotarget.com/fulltext/11743>), licensed under a CC-BY license.



Flow Cytometry: Nanog Antibody [NB100-588] - staining of NTERA-2 cells using NB100-588 at a 1:50 dilution detected using Dylight-488 conjugated goat anti-rabbit secondary antibody.

Western Blot: Nanog Antibody [NB100-588] - HIFs are required for hypoxia-induced expression of pluripotency factors A-C. Breast cancer cell lines were exposed to 20% or 1% O₂ for 24 h & NANOG (A), KLF4 (B), & SOX2 (C) mRNA levels were determined by RT-qPCR, relative to 18S rRNA, & normalized to the mean value for MDA-MB-231 cells (MDA231) at 20% O₂ (mean ± SEM; n = 3). *P < 0.05, **P < 0.01, ***P < 0.001 vs. same cell line at 20% O₂ by Student's t test. D & E. HCC-1954 (D) & MCF-7 (E) subclones, which were stably transfected with an expression vector encoding a non-targeting control (NTC) shRNA, or vector encoding shRNA targeting HIF-1α (sh1α) or HIF-2α (sh2α), or vectors encoding shRNAs targeting both HIF-1α & HIF-2α (DKD), were exposed to 20% or 1% O₂ for 24 h & RT-qPCR was performed to determine NANOG (D) or KLF4 (E) mRNA levels relative to 18S rRNA. The results were normalized to NTC at 20% O₂ (mean ± SEM; n = 3). *P < 0.05, **P < 0.01, ***P < 0.001 vs. NTC at 20% O₂; #P < 0.05, ##P < 0.01, ###P < 0.001 vs. NTC at 1% O₂ by ANOVA. F. ZR75.1 cells treated with vehicle or digoxin (200 nM) were exposed to 20% or 1% O₂ for 24 h & SOX2 mRNA was measured (mean ± SEM; n = 3). *P < 0.05, **P < 0.01 vs. NTC at 20% O₂; ###P < 0.001 vs. NTC at 1% O₂ by ANOVA. G & H. NTC & DKD subclones of HCC-1954 (G) & MCF-7 (H) were exposed to 20% or 1% O₂ for 48 h, whole cell lysates were prepared, & immunoblot assays were performed to analyze HIF-1α, HIF-2α, NANOG & KLF4 protein expression. Actin was also analyzed as a loading control. I. ZR75.1 cells were treated with vehicle or digoxin (200 nM), exposed to 20% or 1% O₂ for 48 h, & HIF-1α, NANOG & SOX2 immunoblot assays were performed. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.11743>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Nanduri J, Wang N, Wang BI, Prabhakar Nr Lysine demethylase KDM6B regulates HIF-1 alpha mediated systemic and cellular responses to intermittent hypoxia *Physiological genomics* 2021-07-23 [PMID: 34297635]

P Montero, J Milara, M Pérez-Leal, C Estornut, I Roger, A Pérez-Fida, C Sanz, J Cortijo Paclitaxel-Induced Epidermal Alterations: An In Vitro Preclinical Assessment in Primary Keratinocytes and in a 3D Epidermis Model *International Journal of Molecular Sciences*, 2022-01-20;23(3):. 2022-01-20 [PMID: 35163066]

Zhang C, Huang S, Zhuang H et al. YTHDF2 promotes the liver cancer stem cell phenotype and cancer metastasis by regulating OCT4 expression via m6A RNA methylation *Oncogene* 2020-05-04 [PMID: 32366907]

Daum R, Brauchle EM, Berrio DAC et al. Non-invasive detection of DNA methylation states in carcinoma and pluripotent stem cells using Raman microspectroscopy and imaging *Sci Rep* 2019-05-07 [PMID: 31065074] (ICC/IF, Human, Mouse)

Kohler Erin E, Baruah Jugajyoti, Urao Norifumi et al. Low-dose 6-bromoindirubin-3'-oxime induces partial dedifferentiation of endothelial cells to promote increased neovascularization. *Stem Cells* 2014-01-01 [PMID: 24496925] (WB, Mouse)

Lu H, Chen I, Shimoda LA et al. Chemotherapy-Induced Ca²⁺ Release Stimulates Breast Cancer Stem Cell Enrichment *Cell Rep.* 2017-02-21 [PMID: 28228260] (WB, Human)

Details:

The positive impact of HIF inhibitors on breast cancer chemotherapy is explored through GSTO1 knockdown.

Zhang C, Zhi WI, Lu H et al. Hypoxia-inducible factors regulate pluripotency factor expression by ZNF217- and ALKBH5-mediated modulation of RNA methylation in breast cancer cells. *Oncotarget.* 2016-08-31 [PMID: 27590511] (WB, Human)

Zhang C, Samanta D, Lu H et al. Hypoxia induces the breast cancer stem cell phenotype by HIF-dependent and ALKBH5-mediated m6A-demethylation of NANOG mRNA. *Proc Natl Acad Sci U S A.* 2016-03-21 [PMID: 27001847] (WB, Human)

Lu H Samanta D Xiang L et al. Chemotherapy triggers HIF-1-dependent glutathione synthesis and copper chelation that induces the breast cancer stem cell phenotype. *Proc Natl Acad Sci U S A.* 2015-07-30 [PMID: 26229077] (WB, Human)

Morgado-Palacin L, Llanos S, Serrano M Ribosomal stress induces L11- and p53-dependent apoptosis in mouse pluripotent stem cells. *Cell Cycle.* 2012-02-01 [PMID: 22262176] (ICC/IF, Mouse)

Hamada M, Malureanu LA, Wijshake T et al. Reprogramming to pluripotency can conceal somatic cell chromosomal instability. *PLoS Genet* 2012-01-01 [PMID: 22952451]

Wu Y, Guo Z, Wu H et al. SUMOylation represses Nanog expression via modulating transcription factors Oct4 and Sox2. *PLoS One* 2012-01-01 [PMID: 22745796]

More publications at <http://www.novusbio.com/NB100-588>





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Products Related to NB100-588

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP2-13177PEP	Nanog Antibody Blocking Peptide

Limitations

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