10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NANOG Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1486A

Specification

NANOG Antibody (N-term) - Product Information

Application	**IF, WB, IHC-P, FC,E**
Primary Accession	Q9H9S0
Other Accession	Q6NSW7, Q5TM84
Reactivity	**Human**
Predicted	**Monkey**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**15-49**

NANOG Antibody (N-term) - Additional Information

Gene ID 79923

Other Names
Homeobox protein NANOG, Homeobox transcription factor Nanog, hNanog, NANOG

Target/Specificity
This NANOG antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 15-49 amino acids from the N-terminal region of human NANOG.

Dilution
IF~~1:10~50
WB~~1:1000
IHC-P~~1:10~50
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
NANOG Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

NANOG Antibody (N-term) - Protein Information

Name NANOG

Function Transcription regulator involved in inner cell mass and embryonic stem (ES) cells proliferation and self-renewal. Imposes pluripotency on ES cells and prevents their differentiation towards extraembryonic endoderm and trophectoderm lineages. Blocks bone morphogenetic protein-induced mesoderm differentiation of ES cells by physically interacting with SMAD1 and interfering with the recruitment of coactivators to the active SMAD transcriptional complexes. Acts as a transcriptional activator or repressor. Binds optimally to the DNA consensus sequence 5'-TAAT[GT][GT]-3' or 5'-[CG][GA][CG]C[GC]ATTAN[GC]- 3'. Binds to the POU5F1/OCT4 promoter (PubMed:25825768). Able to autorepress its expression in differentiating (ES) cells: binds to its own promoter following interaction with ZNF281/ZFP281, leading to recruitment of the NuRD complex and subsequent repression of expression. When overexpressed, promotes cells to enter into S phase and proliferation.

Cellular Location
Nucleus {ECO:0000255|PROSITE-ProRule:PRU00108, ECO:0000269|PubMed:15983365}

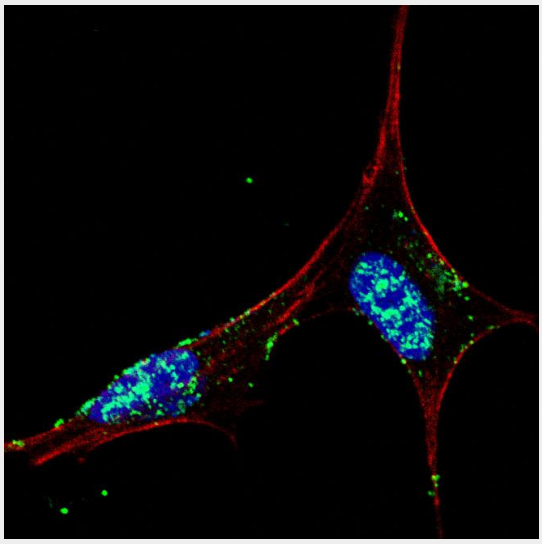
Tissue Location
Expressed in testicular carcinoma and derived germ cell tumors (at protein level). Expressed in fetal gonads, ovary and testis. Also expressed in ovary teratocarcinoma cell line and testicular embryonic carcinoma. Not expressed in many somatic organs and oocytes.

NANOG Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

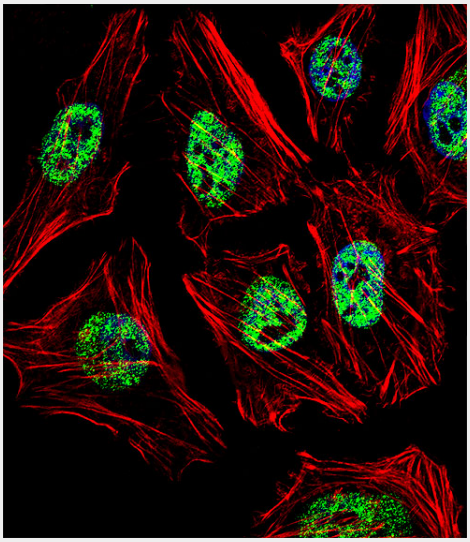
NANOG Antibody (N-term) - Images



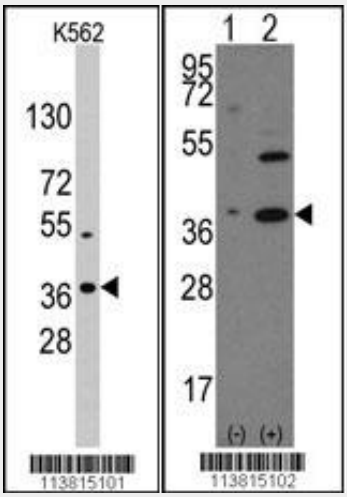
Fluorescent confocal image of SY5Y cells stained with AP1486a NANOG (N-term) antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min), then

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

incubated with AP1486a NANOG (N-term) primary antibody (1:500, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (5.25 µM, 25 min). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 3 min). Nanog immunoreactivity is localized mainly to the nuclei of the SY5Y cells.

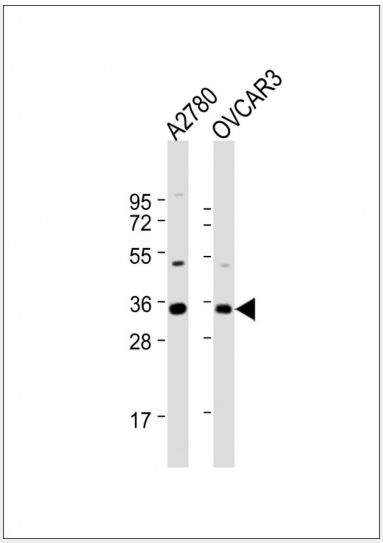


Fluorescent confocal image of Hela cell stained with NANOG Antibody (N-term)(Cat#AP1486a).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with NANOG primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37℃). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). NANOG immunoreactivity is localized to Nucleus significantly.

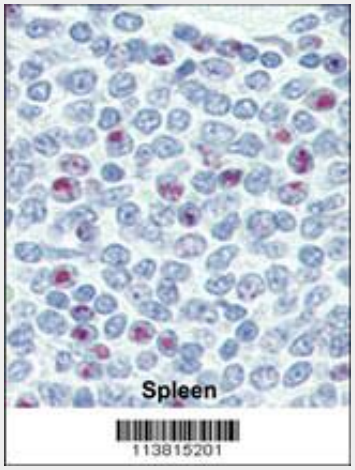


Western blot analysis of anti-NANOG Antibody (N-term) (Cat.#AP1486a) in K562 cell line lysates (35ug/lane). NANOG (arrow) was detected using the purified Pab.Western blot analysis of NANOG (arrow) using rabbit polyclonal NANOG Antibody (N-term) (Cat.#AP1486a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the NANOG gene (Lane 2) (Origene Technologies).

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

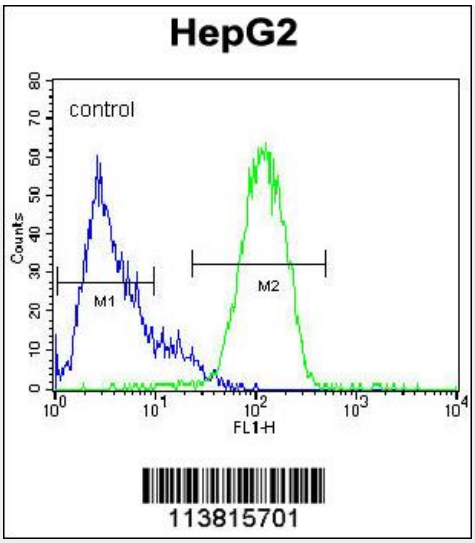


All lanes : Anti-NANOG Antibody (N-term) at 1:1000 dilution Lane 1: A2780 whole cell lysate Lane 2: OVCAR3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 35 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human Spleen tissue reacted with NANOG Antibody (N-term)(Cat.#AP1486a), which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



NANOG Antibody (N-term) (Cat. #AP1486a) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

NANOG Antibody (N-term) - Background

NANOG is a transcription regulator involved in inner cell mass and embryonic stem (ES) cell proliferation and self-renewal. It imposes pluripotency on ES cells and prevents their differentiation towards extraembryonic endoderm and trophectoderm lineages. This protein blocks bone morphogenetic protein-induced mesoderm differentiation of ES cells by physically interacting with SMAD1 and interfering with the recruitment of coactivators to the active SMAD transcriptional complexes. NANOG acts as a transcriptional activator or repressor. It binds optimally to the DNA consensus sequence 5'-[CG][GA][CG]C[GC]ATTAN[GC]-3'. When overexpressed, this protein promotes cells to enter into S phase and proliferation.

NANOG Antibody (N-term) - References

Kochupurakkal,B.S., Biochem. Biophys. Res. Commun. 365 (4), 846-850 (2008)
Freberg,C.T., Mol. Biol. Cell 18 (5), 1543-1553 (2007)

NANOG Antibody (N-term) - Citations

- Biological characteristics of CD133(+) cells in nasopharyngeal carcinoma.