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NANOG Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM1486b

Specification

NANOG Antibody - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q9H9S0
Other Accession	NP_079141.2, XP_002344676.1
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1,k**

NANOG Antibody - Additional Information

Gene ID 79923

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

Target/Specificity
This NANOG monoclonal antibody is generated from mouse immunized with NANOG recombinant protein.

Dilution
WB~~1:500~1000
IHC-P~~1:10~50

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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 is for research use only and not for use in diagnostic or therapeutic procedures.

NANOG Antibody - 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}

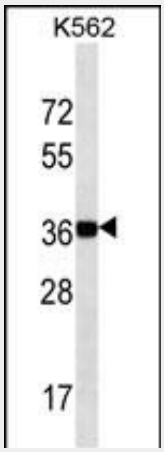
Tissue Location
Expressed in testicular carcinoma and derived germ cell tumors (at protein level). Expressed in fetal gonads, ovary and testis. Also expressed in ovary teratocarcinoma cell line and testicular embryonic carcinoma. Not expressed in many somatic organs and oocytes.

NANOG Antibody - 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 - Images



NANOG (Cat. #AM1486b) western blot analysis in K562 cell line lysates (35µg/lane).This demonstrates the NANOG antibody detected the NANOG protein (arrow).

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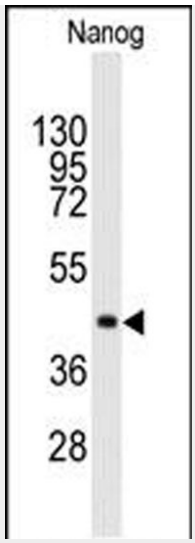
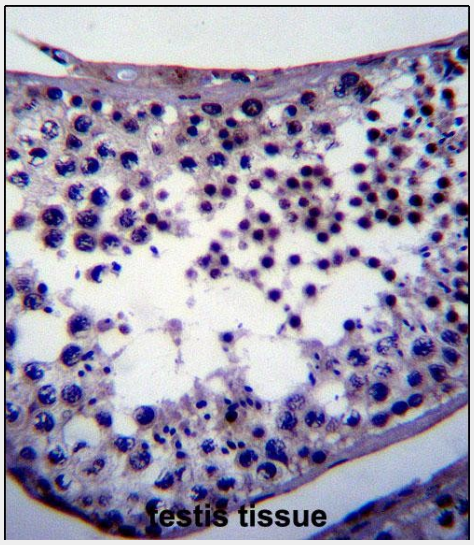


Western blot analysis of anti-NANOG monoclonal antibody (Cat.#AM1486b) by NANOG recombinant protein. NANOG (NANOG + His tag)(arrow) was detected using the Mab.



NANOG Antibody (Cat. #AM1486b)immunohistochemistry analysis in formalin fixed and paraffin embedded human testis tissue followed by peroxidase conjµgation of the secondary antibody and DAB staining.This data demonstrates the use of NANOG Antibody for immunohistochemistry. Clinical relevance has not been evaluated.

NANOG Antibody - Background

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 (By similarity). Acts as a transcriptional activator or repressor (By similarity). Binds optimally to the DNA consensus sequence 5'-TAAT[GT][GT]-3' or 5'-[CG][GA][CG]C[GC]ATTAN[GC]-3' (By similarity). When overexpressed, promotes cells to enter into S phase and proliferation (By similarity).

NANOG Antibody - References

Trubiani, O., et al. J. Cell. Physiol. 225(1):123-131(2010)

Po, A., et al. EMBO J. 29(15):2646-2658(2010)
Zbinden, M., et al. EMBO J. 29(15):2659-2674(2010)
Moretto-Zita, M., et al. Proc. Natl. Acad. Sci. U.S.A. 107(30):13312-13317(2010)
Kuijk, E.W., et al. PLoS ONE 5 (6), E10987 (2010) :