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NANOG Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1486b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9H9S0
Other Accession	NP_079141.2, XP_002344676.1
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,k
Clone Names	60CT77.1.1
Calculated MW	34620

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~~1:100~500 E~~Use at an assay dependent concentration.
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.

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.

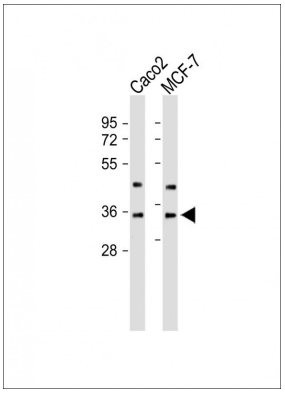
Background

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).

References

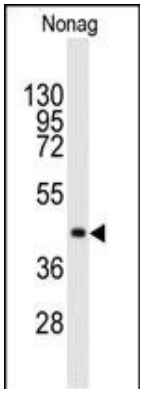
Trubiani, O., et al. J. Cell. Physiol. 225(1):123-131(2010)
Po, A., et al. EMBO J. 29(15):2646-2658(2010)
Zbinden, M., et al. EMBO J. 29(15):2659-2674(2010)
Moretto-Zita, M., et al. Proc. Natl. Acad. Sci. U.S.A. 107(30):13312-13317(2010)
Kuijk, E.W., et al. PLoS ONE 5 (6), E10987 (2010) :

Images

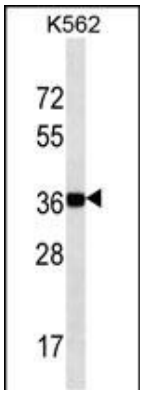


All lanes : Anti-Nanog at 1:1000 dilution Lane 1: Caco2 whole cell lysate Lane 2: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG/A/M(H/L), Peroxidase conjugated at 1/2000 dilution. Observed band size : 34kDa Blocking/Dilution buffer: 5% NFDM/TBST.

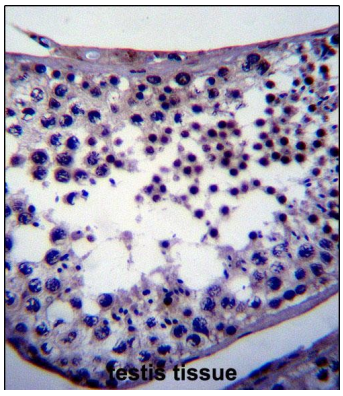
Western blot analysis of anti-NANOG monoclonal antibody (Cat.#AM1486b) by NONAG recombinant protein. NANOG (NANOG + His tag)(arrow) was detected



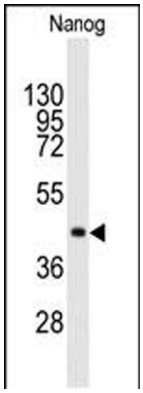
using the Mab.



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



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



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