

NANOG Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP1486c

Product Information

Application WB, E
Primary Accession Q9H9S0

Other Accession Q6NSW7, Q5TM84, Q4IM65, Q8N7R0

Reactivity Human

Predicted Monkey, Bovine

Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Calculated MW 34620
Antigen Region 94-123

Additional Information

Gene ID 79923

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

NANOG

Target/SpecificityThis NANOG antibody is generated from rabbits immunized with a KLH

conjugated synthetic peptide between 94-123 amino acids from the Central

region of human NANOG.

Dilution WB~~1:1000 E~~Use at an assay dependent concentration.

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 (Center) 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.

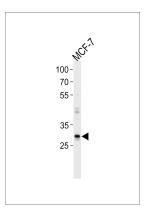
Background

NANOG is a Ttranscription regulator involved in inner cell mass and embryonic stem (ES) cels 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.

References

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

Images



NANOG Antibody (Center) (Cat. #AP1486c) western blot analysis in MCF-7 cell line lysates (35ug/lane). This demonstrates the NANOG antibody detected the NANOG protein (arrow).

Citations

- Combinatorial interactions of genetic variants in human cardiomyopathy.
- AHNAK2 is a Novel Prognostic Marker and Oncogenic Protein for Clear Cell Renal Cell Carcinoma,

• Reprogramming mediated radio-resistance of 3D-grown cancer cells.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.