

# Phospho-Nanog(S71) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3649a

## Product Information

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<b>Application</b>	IF, DB, E
<b>Primary Accession</b>	<a href="#">Q9H9S0</a>
<b>Other Accession</b>	<a href="#">Q6NSWZ</a> , <a href="#">Q5TM84</a>
<b>Reactivity</b>	Human
<b>Predicted</b>	Monkey
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB18920
<b>Calculated MW</b>	34620

## Additional Information

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<b>Gene ID</b>	79923
<b>Other Names</b>	Homeobox protein NANOG, Homeobox transcription factor Nanog, hNanog, NANOG
<b>Target/Specificity</b>	This Nanog Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S71 of human Nanog.
<b>Dilution</b>	IF~~1:10~50 DB~~1:500 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	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.
<b>Precautions</b>	Phospho-Nanog(S71) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	NANOG
<b>Function</b>	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.

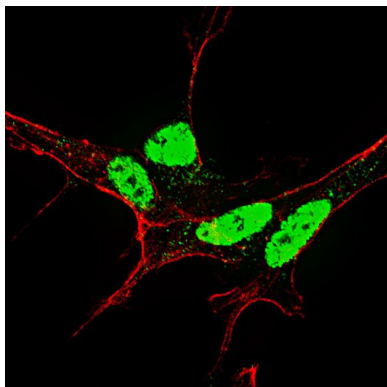
## Background

NANOG is a Transcription regulator involved in inner cell mass and embryonic stem (ES) cells 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

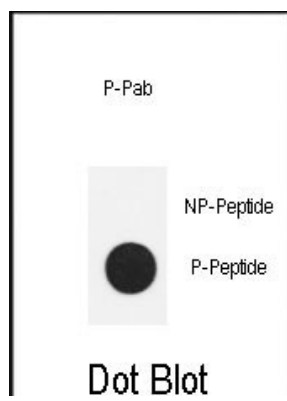
Kochupurakkal, B.S., Biochem. Biophys. Res. Commun. 365 (4), 846-850 (2008)  
Freberg, C.T., Mol. Biol. Cell 18 (5), 1543-1553 (2007)

## Images



Fluorescent confocal image of SY5Y cells stained with AP3649a Phospho-Nanog-S71 antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min), then incubated with AP3649a Phospho-Nanog-S71 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, 1 h). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (5.25 µM, 25 min). Phospho-Nanog immunoreactivity is localized very specifically to the nuclei of the SY5Y cells.

Dot blot analysis of anti-Phospho-Nanog-S71 Antibody (Cat. #AP3649a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.



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