Nanog antibody (pAb)

Catalog Nos: 61419, 61420
RRID: AB_2750953
Isotype: IgG
Application(s): ChIP, ChIP-Seq, ICC, IF, WB
Reactivity: Human, Mouse

Volumes: 100 µl, 10 µl
Purification: Affinity Purified
Host: Rabbit
Molecular Weight: 45 kDa

Background: Nanog (Nanog homeobox) is a transcriptional 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).

Immunogen: This antibody was raised against a peptide within the N-terminal region of mouse Nanog.

Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

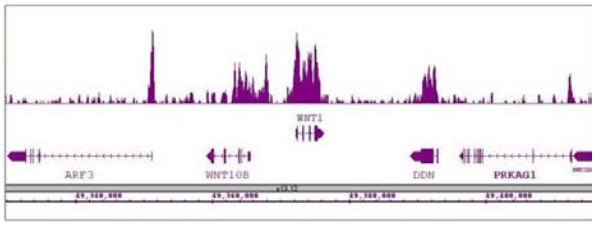
Application Notes:
Applications Validated by Active Motif:
ChIP: 5 µl per ChIP
ChIP-Seq: 5 µl each
ICC/IF: 1:200 dilution
WB*: 0.5 - 2 µg/ml

ChIP-Seq validation was performed by Active Motif's Epigenetics Services; the complete data set is available in the UCSC Genome Browser by clicking here.

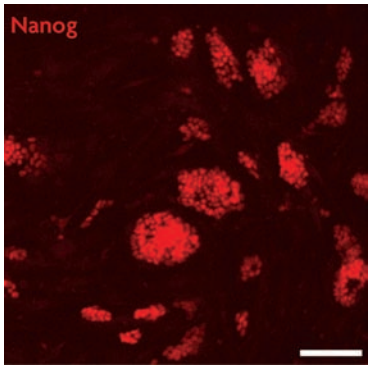
*Note: Many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western blot. Individual optimization may be required.

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

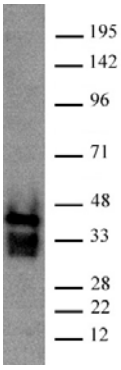
This product is for research use only and is not for use in diagnostic procedures.



Nanog antibody (pAb) tested by ChIP-Seq.
ChIP was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with 30 ug of chromatin from undifferentiated hESC cells and 3 µl of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 9 million sequence tags were mapped to identify Nanog binding sites. The image shows binding across a region of chromosome 12. You can view the complete data set in the UCSC Genome Browser, starting at this specific location, here.



Nanog antibody (pAb) tested by Immunofluorescence
Mouse embryonic stem cells (mESCs) grown on mouse embryonic fibroblast feeder cells (MEFs) were fixed with 4% paraformaldehyde for 10 minutes at room temperature. Cells were then permeabilized and blocked by incubating with Blocking Solution containing 5% serum/0.1% Triton X-100 in D-PBS for 2 hours at room temperature. Cells were then incubated with Nanog antibody (Catalog No. 61419, *red*) at 1:200 dilution overnight at 4°C, washed with D-PBS, and incubated for 2 hours at room temperature with goat anti-mouse Cy3 secondary antibody at 1:250 dilution. Cells were visualized using a Zeiss fluorescent microscope at 20X magnification. Images show that Nanog antibody specifically stains mESC colonies and does not stain MEFs. Absence of Nanog staining in a subset of cells within the colonies suggests differentiation. Scale bars, 100 µm.



Nanog (pAb) tested by Western blot.
20 µg of mouse Embryonic Stem Cell (ESC) extract was run on SDS-PAGE and probed with antibody at 2 µg/ml.

The file cannot be found:
61419-09919002-5.