bs-0829R **[Primary Antibody]**

Nanog Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 71950

Target: Nanog

Immunogen: KLH conjugated synthetic peptide derived from mouse Nanog: 71-170/305.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: Nanog is a newly identified homeodomain-bearing transcriptional factor. Nanog expression is specific to early embryos and pluripotential stem cells including mouse and human embryonic stem (ES) and embryonic germ (EG) cells. It is a key molecule involved in the signaling pathway for maintaining the capacity for self-renewal and pluripotency, bypassing regulation by the STAT3 pathway. Nanog mRNA is present in pluripotent mouse and human cell lines, and absent from differentiated cells. Nanog-deficient ES cells lose pluripotency and differentiate into extraembryonic endoderm lineage. Thus it is one of the molecular markers suitable for recognizing the undifferentiated state of stem cells in the mouse and human.
NANOG is a new marker for testicular carcinoma in situ and germ cell tumors.
NANOG is a gene expressed in embryonic stem cells (ESCs) and is thought to be a key factor in maintaining pluripotency. NANOG thought to function in concert with other factors such as POU5F1 and SOX2 to establish ESC identity. These cells offer an important area of study because of their ability to maintain pluripotency. In other words, these cells have the ability to become virtually any cell of any of the three germ layers (endoderm, ectoderm, mesoderm).

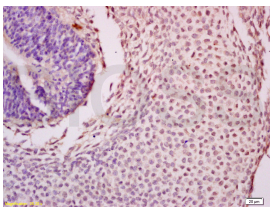
Applications: **IHC-P** (1:100-500)
Flow-Cyt (3μg/Test)

Reactivity: Human, Mouse (predicted: Rat)

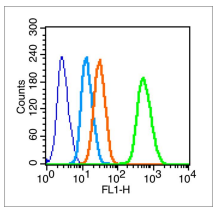
Predicted MW.: 34 kDa

Subcellular Location: Nucleus

VALIDATION IMAGES



Tissue/cell: Mouse tooth germ tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-Nanog Polyclonal Antibody, Unconjugated(bs-0829R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control (blue line): Hela (blue). Primary Antibody (green line): Rabbit Anti-Nanog antibody(bs-0829R) Dilution: 1μg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody (white blue line): F(ab')2 fragment goat anti-rabbit IgG-FITC Dilution: 1μg /test. Protocol The cells were fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 30 min on ice.Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by

the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=14.3]** Li Xu. et al. LIF Promotes Sec15b-Mediated STAT3 Exosome Secretion to Maintain Stem Cell Pluripotency in Mouse Embryonic Development. ADV SCI. 2024 Oct;:2407971 WB ;Mouse. 39475099
- **[IF=6.2]** Ren Xuan. et al. BRG1 improves reprogramming efficiency by enhancing glycolytic metabolism. CELL MOL LIFE SCI. 2024 Dec;81(1):1-14 WB ;Pig. 39643758
- **[IF=6.217]** Wang L et al. Zoledronic acid inhibits the growth of cancer stem cell derived from cervical cancer cell by attenuating their stemness phenotype and inducing apoptosis and cell cycle arrest through the Erk1/2 and Akt pathways. J Exp Clin Cancer Res. 2019 Feb 21;38(1):93. IF,WB ;Human&Mouse. 30791957
- **[IF=4.9]** Ryeo-Eun Go. et al. A Fungicide, Fludioxonil, Formed the Polyploid Giant Cancer Cells and Induced Metastasis and Stemness in MDA-MB-231 Triple-Negative Breast Cancer Cells. INT J MOL SCI. 2024 Jan;25(16):9024 WB ;Human. 39201710
- **[IF=4.963]** El-Badawy et al. Cancer cell-soluble factors reprogram mesenchymal stromal cells to slow cycling, chemoresistant cells with a more stem-like state. (2017) Stem.Cell.Res.Ther. 8:254 FCM,ICC ;="Human". 29115987