

Rabbit Anti-Nanog antibody

SL10414R

Product Name	Nanog
Chinese Name	胚胎 Stem cells 关键蛋白抗体
Alias	NANOG_MOUSE; Embryonic stem cell specific homeobox protein (Nanog); ENK; FLJ12581; FLJ40451; Homeobox transcription factor Nanog; Nanog homeobox; Homeobox protein NANOG; ES cell-associated protein 4; Early embryo specific expression NK-type homeobox protein; Homeobox transcription factor Nanog; Nanog; Ecat4.
Research Area	Tumour Chromatin and nuclear signals Signal transduction Stem cells Cyclin Cell Surface Molecule Cell differentiation
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Mouse, Rat, WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Applications	
Theoretical molecular weight	34kDa
Cellular localization	The nucleus
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from mouse Nanog: 101-200/305
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human,

therapeutic or diagnostic applications.

PubMed

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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).

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'. When overexpressed, promotes cells to enter into S phase and proliferation.

Product Detail

Subunit:

Interacts with SMAD1 and SALL4.

Subcellular Location:

Nucleus.

Tissue Specificity:

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.

Similarity:

Belongs to the Nanog homeobox family.
Contains 1 homeobox DNA-binding domain.

SWISS:
Q80Z64

Gene ID:
71950

Database links:

[Entrez Gene: 100293888](#) Human

[Entrez Gene: 79923](#) Human

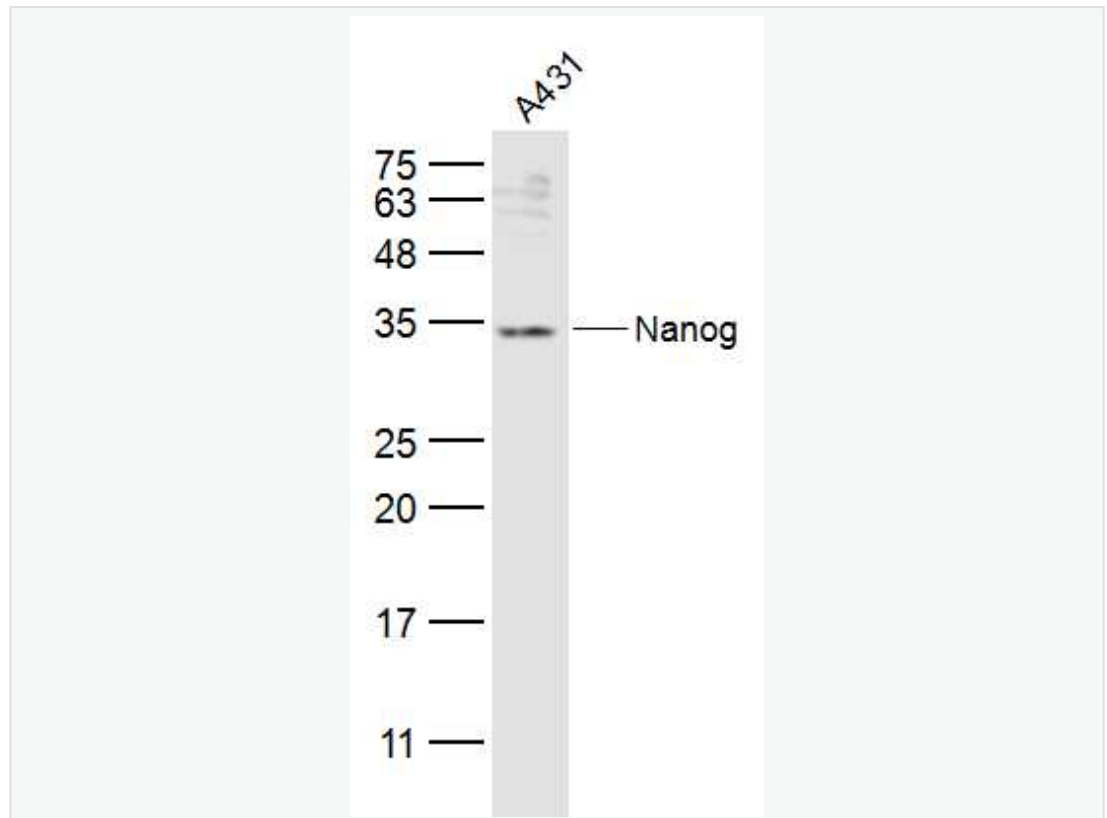
[Entrez Gene: 71950](#) Mouse

[Omim: 607937](#) Human

[SwissProt: Q9H9S0](#) Human

[Unigene: 635882](#) Human

**Product
Picture**



Sample:

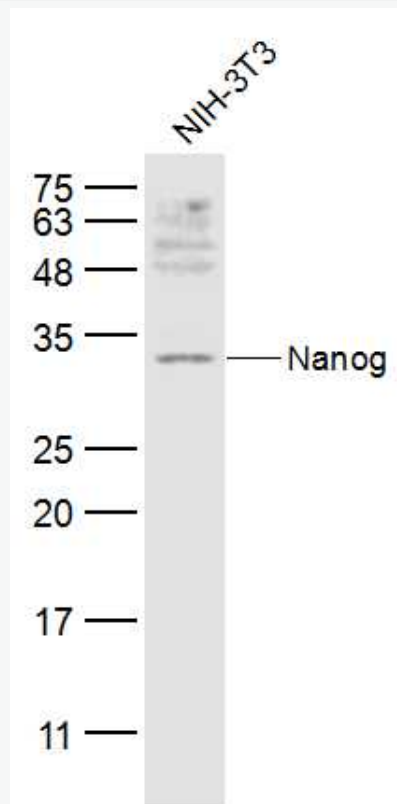
A431(Human) Cell Lysate at 30 ug

Primary: Anti-Nanog (SL10414R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 34 kD

Observed band size: 34 kD



Sample:

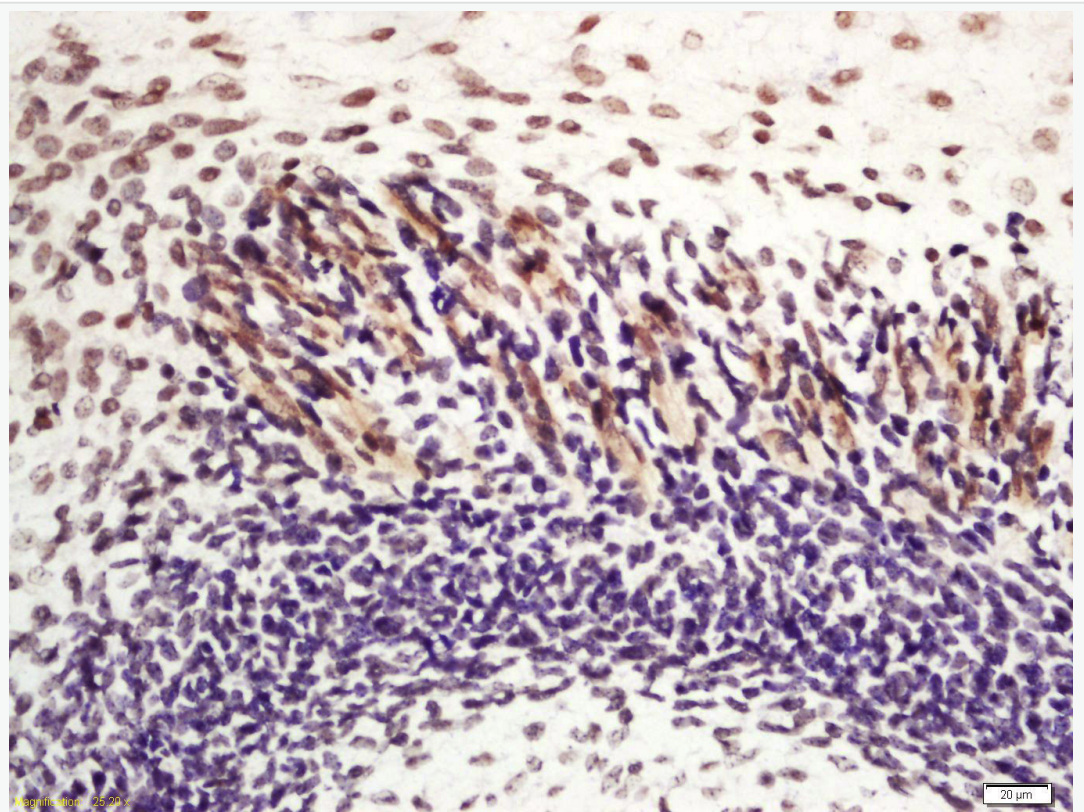
NIH/3T3(Mouse) Cell Lysate at 30 ug

Primary: Anti-Nanog (SL10414R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 34 kD

Observed band size: 34 kD

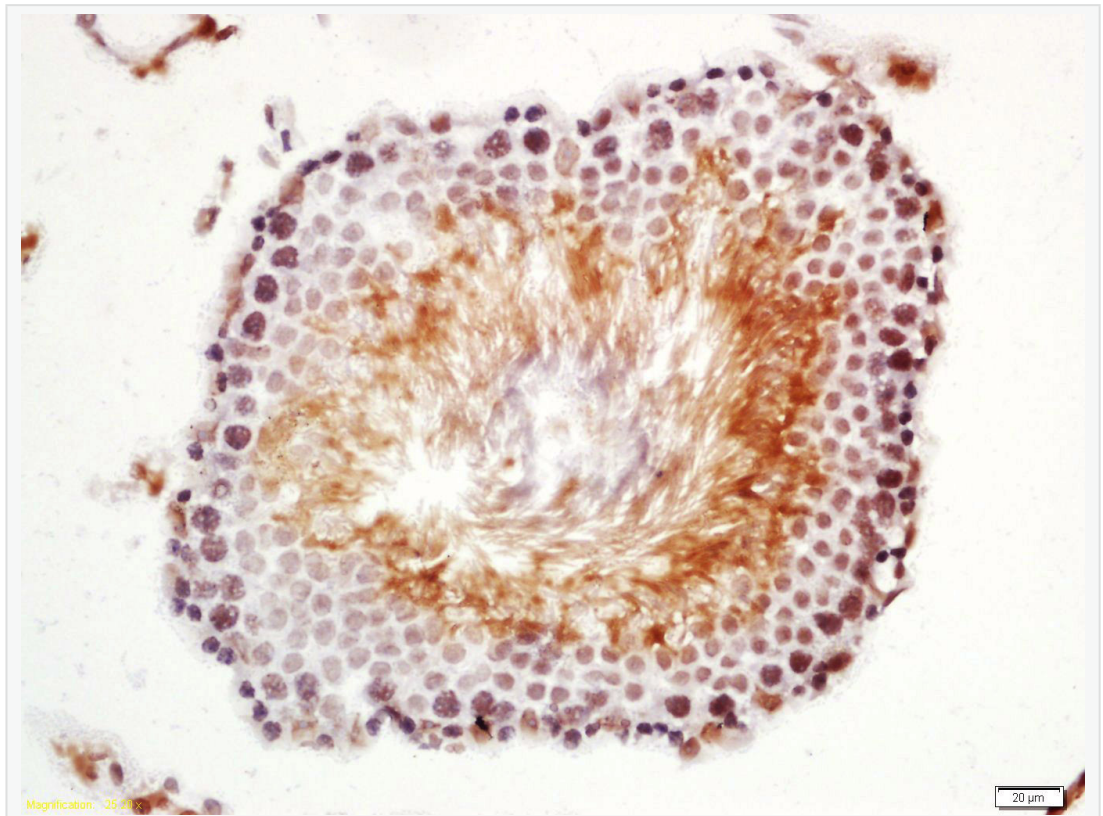


Tissue/cell: mouse embryo tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, 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(SL10414R) 1:200,

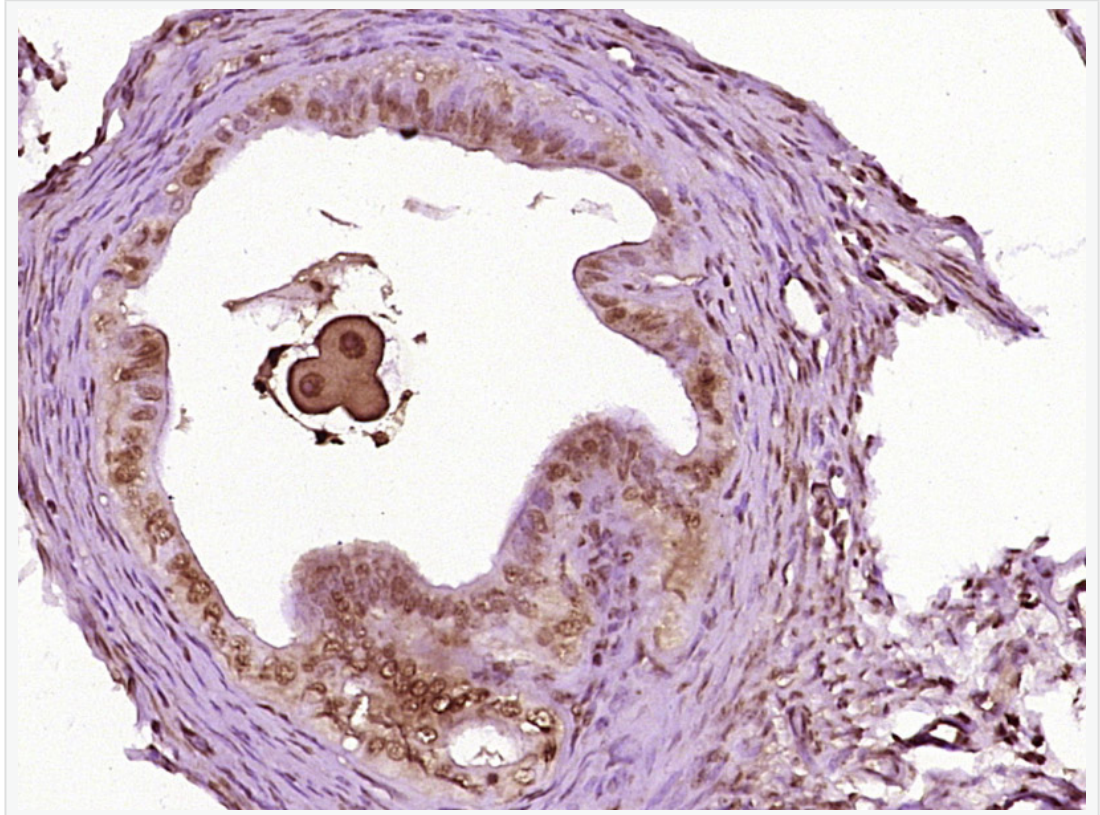
overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



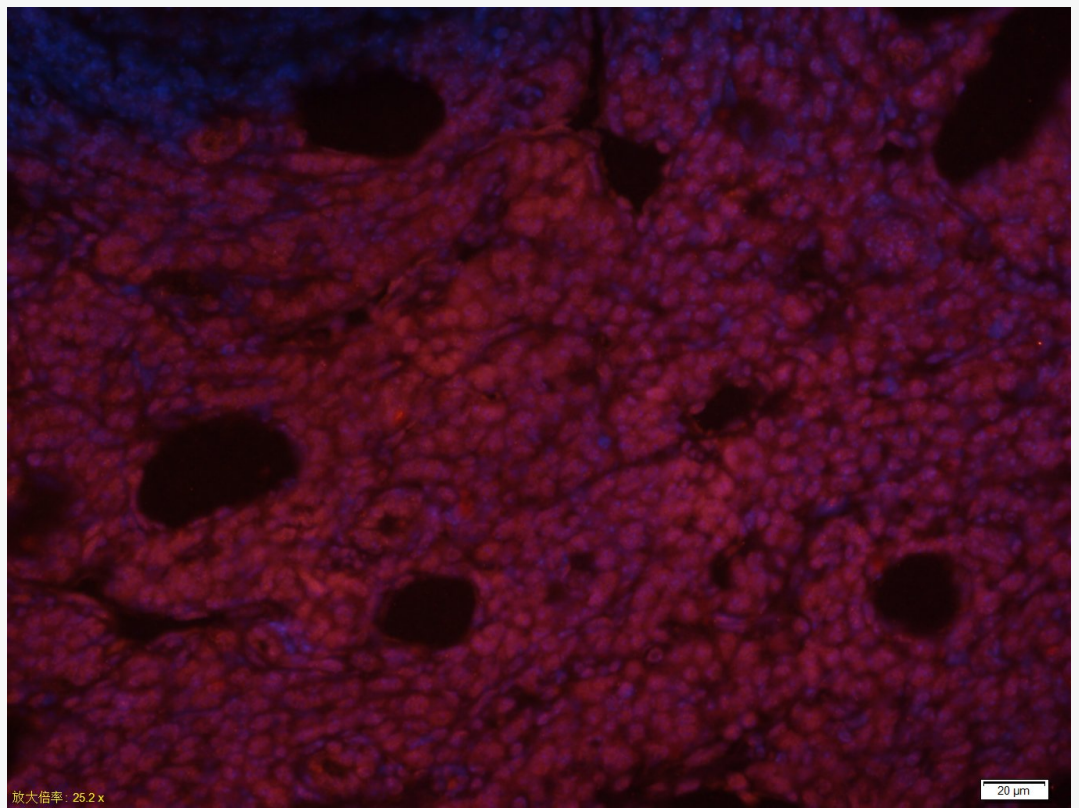
Tissue/cell: rat testis tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Nanog Polyclonal Antibody, Unconjugated(SL10414R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



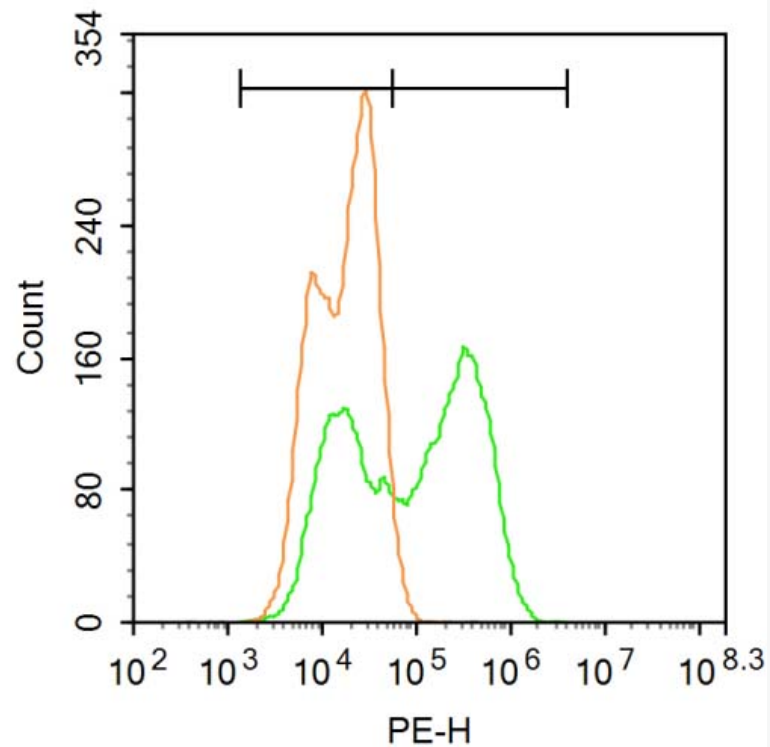
Tissue/cell: rat testis tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block
endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer
(normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Nanog Polyclonal Antibody, Unconjugated(SL10414R) 1:200,
overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and
DAB(C-0010) staining



Paraformaldehyde-fixed, paraffin embedded (Mouse ovarian); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Nanog) Polyclonal Antibody, Unconjugated (SL10414R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Mouse ovary); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Nanog) Polyclonal Antibody, Unconjugated (SL10414R) at 1:400 overnight at 4°C, followed by a conjugated Goat Anti-Rabbit IgG antibody (SL0295G-CY3) for 90 minutes, and DAPI for nuclei staining.



Blank control: HeLa.

Primary Antibody (green line): Rabbit Anti- Nanog antibody (SL10414R)

Dilution: $3\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution: $1\mu\text{g} / \text{test}$.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with ice-cold methanol for 20 min at -20°C .The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min



at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.