



Rabbit Anti-Nanog antibody

SL23500R

Product Name:	Nanog
Chinese Name:	胚胎Stem cells关键蛋白抗体
Alias:	NANOG_HUMAN; 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.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	34kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Nanog:111-210/305
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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.

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:

Q9H9S0

Gene ID:

79923

Database links:

[Entrez Gene: 100293888](#)Human

[Entrez Gene: 79923](#)Human

[Entrez Gene: 71950](#) Mouse

[Omim: 607937](#)Human

[SwissProt: Q9H9S0](#)Human

[Unigene: 635882](#)Human

Important Note:

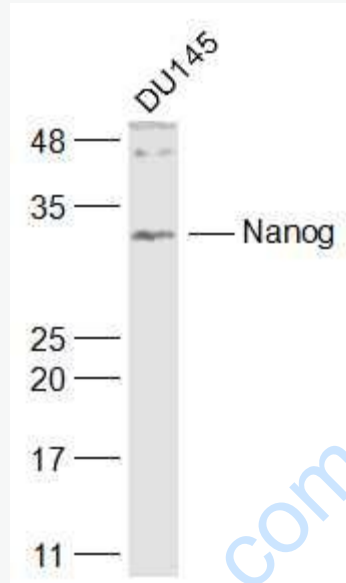
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研究表明;早期胚胎在没有Nanog存在的情况下是不能存活的,但是这一蛋白的表达水平至今还有待于进一步研究。学者认为:Nanog依然是一种对于生殖细胞(germ cells)形成的必要因子, Nanog也是调控着细胞融合后的多重功能的关键因子。

胚胎Stem

cells是当今生命科学和生物技术研究的热点,这主要是由于它具有“发育全能性”的功能。ES能分化成人体200多种细胞类型,形成机体的任何细胞、组织和器官。通过掌握其分化发育的规律,在人工条件下定向分化为所需的细胞、组织乃至器官,科学家们希望可以用来治疗目前还难以或无法治愈的帕金森氏病、老年性痴呆、白血病、Diabetes等顽症,并且解决十分紧缺的组织和器官移植的来源问题,并且通过进一步与克隆技术相结合,运用体The nucleus转移技术来得到ES,还能解决细胞治疗以及组织和器官移植的免疫排异难题。

Picture:



Sample:

DU145(Human) Cell Lysate at 30 ug

Primary: Anti-Nanog (SL23500R) at 1/1000 dilution

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

Predicted band size: 34 kD

Observed band size: 34 kD