

# Nanog (C-4): sc-376915

## BACKGROUND

Nanog (from "Tir Na Nog", the mythologic Celtic land of the ever young) is a divergent homeodomain protein that directs pluripotency and differentiation of undifferentiated embryonic stem cells. Nanog mRNA is present in pluripotent mouse and human cell lines and absent from differentiated cells. Human Nanog protein shares 52% overall amino acid identity with the mouse protein and 85% identity in the homeodomain. Human Nanog maps to gene locus 12p13.31, whereas mouse Nanog maps to gene loci 6 F2. Murine embryonic Nanog expression is detected in the inner cell mass of the blastocyst. High levels of human Nanog expression have been detected by Northern analysis in the undifferentiated NTERA-2 cl.D1 embryonal carcinoma cell line.

## CHROMOSOMAL LOCATION

Genetic locus: Nanog (mouse) mapping to 6 F2.

## SOURCE

Nanog (C-4) is a mouse monoclonal antibody raised against amino acids 181-329 mapping at the C-terminus of Nanog of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nanog (C-4) is available conjugated to agarose (sc-376915 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376915 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376915 PE), fluorescein (sc-376915 FITC), Alexa Fluor® 488 (sc-376915 AF488), Alexa Fluor® 546 (sc-376915 AF546), Alexa Fluor® 594 (sc-376915 AF594) or Alexa Fluor® 647 (sc-376915 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376915 AF680) or Alexa Fluor® 790 (sc-376915 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

Nanog (C-4) is recommended for detection of Nanog of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Nanog siRNA (m): sc-44833, Nanog shRNA Plasmid (m): sc-44833-SH and Nanog shRNA (m) Lentiviral Particles: sc-44833-V.

Molecular Weight of Nanog: 40 kDa.

Positive Controls: ES-D3 whole cell lysate: sc-364776, NIH/3T3 whole cell lysate: sc-2210 or P19 cell lysate: sc-24760.

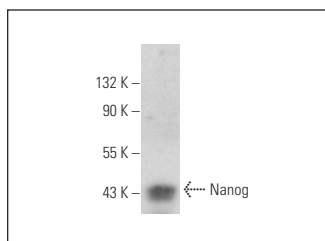
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

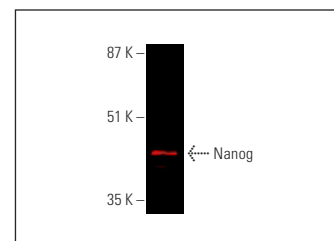
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



Nanog (C-4): sc-376915. Western blot analysis of Nanog expression in P19 whole cell lysate.



Nanog (C-4): sc-376915. Near-infrared western blot analysis of Nanog expression in ES-D3 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ: BP-CFL 790: sc-516181.

## SELECT PRODUCT CITATIONS

- Yan, H., et al. 2015. p53 is active in murine stem cells and alters the transcriptome in a manner that is reminiscent of mutant p53. *Cell Death Dis.* 6: e1662.
- Cherepkova, M.Y., et al. 2016. Leukemia inhibitory factor (LIF) withdrawal activates mTOR signaling pathway in mouse embryonic stem cells through the MEK/ERK/TSC2 pathway. *Cell Death Dis.* 7: e2050.
- Lin, J., et al. 2016. Efficient derivation of extraembryonic endoderm stem cell lines from mouse postimplantation embryos. *Sci. Rep.* 6: 39457.
- Nair, R., et al. 2017. Haploid parthenotes express differential response to *in vitro* exposure of ammonia compared to normally fertilized embryos. *Biochem. Biophys. Res. Commun.* 486: 88-93.
- Zhu, Z., et al. 2017. PHB associates with the HIRA complex to control an epigenetic-metabolic circuit in human ESCs. *Cell Stem Cell* 20: 274-289.e7.
- Lin, J., et al. 2017. PDGFRA is not essential for the derivation and maintenance of mouse extraembryonic endoderm stem cell lines. *Stem Cell Reports* 9: 1062-1070.
- Li, L., et al. 2017. siRNA-mediated knockdown of ID1 disrupts Nanog- and Oct-4-mediated cancer stem cell-likeness and resistance to chemotherapy in gastric cancer cells. *Oncol. Lett.* 13: 3014-3024.
- Wang, L.H., et al. 2018. The antihelminthic niclosamide inhibits cancer stemness, extracellular matrix remodeling, and metastasis through dysregulation of the nuclear β-catenin/c-Myc axis in OSCC. *Sci. Rep.* 8: 12776.
- Todaro, F., et al. 2019. Regulation of Kit expression in early mouse embryos and ES cells. *Stem Cells* 37: 332-344.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.