SANTA CRUZ BIOTECHNOLOGY, INC.

Nanog (H-2): sc-374103

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (human) mapping to 12p13.31; Nanog (mouse) mapping to 6 F2.

SOURCE

Nanog (H-2) is a mouse monoclonal antibody raised against amino acids 151-305 mapping at the C-terminus of Nanog of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nanog (H-2) is available conjugated to agarose (sc-374103 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374103 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374103 PE), fluorescein (sc-374103 FITC), Alexa Fluor® 488 (sc-374103 AF488), Alexa Fluor® 546 (sc-374103 AF546), Alexa Fluor® 594 (sc-374103 AF594) or Alexa Fluor® 647 (sc-374103 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374103 AF680) or Alexa Fluor® 790 (sc-374103 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Nanog (H-2) is recommended for detection of Nanog of mouse, rat and human 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 (h): sc-43958, Nanog siRNA (m): sc-44833, Nanog shRNA Plasmid (h): sc-43958-SH, Nanog shRNA Plasmid (m): sc-44833-SH, Nanog shRNA (h) Lentiviral Particles: sc-43958-V and Nanog shRNA (m) Lentiviral Particles: sc-44833-V.

Molecular Weight of Nanog: 40 kDa.

Positive Controls: Nanog (h): 293 Lysate: sc-171225 or HeLa nuclear extract: sc-2120.

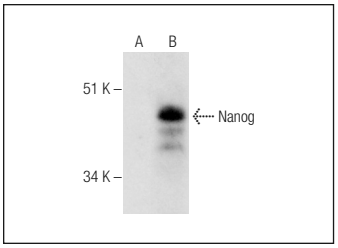
STORAGE

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

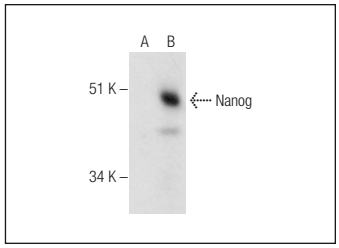
RESEARCH USE

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

DATA



Nanog (H-2): sc-374103. Western blot analysis of Nanog expression in non-transfected: sc-117752 (**A**) and human Nanog transfected: sc-369869 (**B**) 293T whole cell lysates.



Nanog (H-2): sc-374103. Western blot analysis of Nanog expression in non-transfected: sc-110760 (**A**) and human Nanog transfected: sc-171225 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Sharma, A., et al. 2013. The role of SIRT6 protein in aging and reprogramming of human induced pluripotent stem cells. J. Biol. Chem. 288: 18439-18447.
2. Yu, A.Q., et al. 2016. TALEN-induced disruption of Nanog expression results in reduced proliferation, invasiveness and migration, increased chemosensitivity and reversal of EMT in Hep G2 cells. Oncol. Rep. 35: 1657-1663.
3. Ali, M.S., et al. 2018. Expressional changes in stemness markers post electrochemotherapy in pancreatic cancer cells. Bioelectrochemistry 122: 84-92.
4. Zhao, D. and Cui, Z. 2019. MicroRNA-361-3p regulates retinoblastoma cell proliferation and stemness by targeting hedgehog signaling. Exp. Ther. Med. 17: 1154-1162.
5. Selvaraj, S., et al. 2019. Screening identifies small molecules that enhance the maturation of human pluripotent stem cell-derived myotubes. Elife 8: e47970.
6. Ameneiro, C., et al. 2020. BMAL1 coordinates energy metabolism and differentiation of pluripotent stem cells. Life Sci. Alliance 3: e201900534.
7. Guallar, D., et al. 2020. ADAR1-dependent RNA editing promotes MET and iPSC reprogramming by alleviating ER stress. Cell Stem Cell 27: 300-314.e11.
8. Cilloni, D., et al. 2020. Transplantation induces profound changes in the transcriptional asset of hematopoietic stem cells: identification of specific signatures using machine learning techniques. J. Clin. Med. 9: 1670.
9. Gao, Q., et al. 2021. High-throughput screening in postimplantation haploid epiblast stem cells reveals Hs3st3b1 as a modulator for reprogramming. Stem Cells Transl. Med. 10: 743-755.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.