

Nanog (A-11): sc-374001

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 (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 267-301 near the C-terminus of Nanog of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nanog (A-11) is available conjugated to agarose (sc-374001 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374001 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374001 PE), fluorescein (sc-374001 FITC), Alexa Fluor® 488 (sc-374001 AF488), Alexa Fluor® 546 (sc-374001 AF546), Alexa Fluor® 594 (sc-374001 AF594) or Alexa Fluor® 647 (sc-374001 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374001 AF680) or Alexa Fluor® 790 (sc-374001 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374001 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Nanog (A-11) 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.

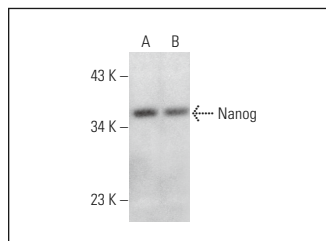
Molecular Weight of Nanog: 40 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, Raji whole cell lysate: sc-364236 or HeLa nuclear extract: sc-2120.

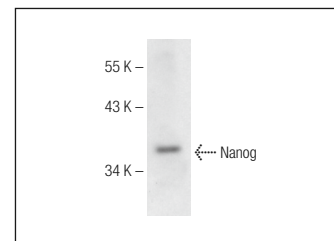
STORAGE

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

DATA



Nanog (A-11): sc-374001. Western blot analysis of Nanog expression in NTERA-2 cl.D1 (A) and Raji (B) whole cell lysates.



Nanog (A-11): sc-374001. Western blot analysis of Nanog expression in HeLa nuclear extract.

SELECT PRODUCT CITATIONS

- Naeemipour, M., et al. 2013. Expression dynamics of pluripotency genes in chicken primordial germ cells before and after colonization of the genital ridges. *Mol. Reprod. Dev.* 80: 849-861.
- Peng, X., et al. 2014. Germline transmission of an embryonic stem cell line derived from BALB/C cataract mice. *PLoS ONE* 9: e90707.
- Sun, Y., et al. 2016. NFκB signaling plays irreplaceable roles in cisplatin-induced bladder cancer chemoresistance and tumor progression. *Int. J. Oncol.* 48: 225-234.
- Deng, L., et al. 2017. Functional evidence that the self-renewal gene Nanog regulates esophageal squamous cancer development. *Biochem. Biophys. Res. Commun.* 490: 161-168.
- Zhang, G., et al. 2018. Salinomycin may inhibit the cancer stem-like populations with increased chemoradioresistance that nasopharyngeal cancer tumorspheres contain. *Oncol. Lett.* 16: 2495-2500.
- Zhang, S., et al. 2019. Shrimp miRNA suppresses the stemness of human cancer stem cells via the PIN1 pathway. *FASEB J.* 33: 10767-10779.
- Sousa, M.I., et al. 2020. Metabolic characterization of a paused-like pluripotent state. *Biochim. Biophys. Acta Gen. Subj.* 1864: 129612.
- Togano, S., et al. 2021. Gastric cancer stem cells survive in stress environments via their autophagy system. *Sci. Rep.* 11: 20664.
- Ebrahimi, N., et al. 2022. LncRNA LOC100507144 acts as a novel regulator of CD44/Nanog/Sox2/miR-302/miR-21 axis in colorectal cancer. *Biofactors* 48: 164-180.
- Malla, S., et al. 2022. ZFP207 sustains pluripotency by coordinating OCT4 stability, alternative splicing and RNA export. *EMBO Rep.* 23: e53191.

RESEARCH USE

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

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