SANTA CRUZ BIOTECHNOLOGY, INC.

Nanog (M-149): sc-33760

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.

REFERENCES

1. Chambers, I., et al. 2003. Functional expression cloning of Nanog, a pluripotency sustaining factor in embryonic stem cells. Cell 113: 643-655.
2. Pan, G.J., et al. 2003. Identification of two distinct transactivation domains in the pluripotency sustaining factor nanog. Cell Res. 13: 499-502.

CHROMOSOMAL LOCATION

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

SOURCE

Nanog (M-149) is a rabbit polyclonal antibody raised against amino acids 181-329 mapping at the C-terminus of Nanog of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Nanog (M-149) is recommended for detection of Nanog of mouse and rat origin by Western Blotting (starting dilution 1:200, 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: NIH/3T3 whole cell lysate: sc-2210.

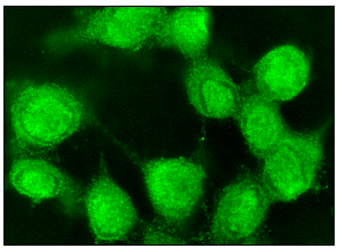
STORAGE

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 (M-149): sc-33760. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Yang, J., et al. 2008. Genome-wide analysis reveals Sall4 to be a major regulator of pluripotency in murine-embryonic stem cells. Proc. Natl. Acad. Sci. USA 105: 19756-19761.
2. Markert, L.D., et al. 2009. Identification of distinct topographical surface microstructures favoring either undifferentiated expansion or differentiation of murine embryonic stem cells. Stem Cells Dev. 18: 1331-1342.
3. Wu, Q., et al. 2009. CARM1 is required in embryonic stem cells to maintain pluripotency and resist differentiation. Stem Cells 27: 2637-2645.
4. Huang, J., et al. 2009. More synergetic cooperation of Yamanaka factors in induced pluripotent stem cells than in embryonic stem cells. Cell Res. 19: 1127-1138.
5. Fernandes, T.G., et al. 2010. Kinetic and metabolic analysis of mouse embryonic stem cell expansion under serum-free conditions. Biotechnol. Lett. 32: 171-179.
6. Chen, T., et al. 2010. E-cadherin-mediated cell-cell contact is critical for induced pluripotent stem cell generation. Stem Cells 28: 1315-1325.
7. Lue, Y., et al. 2010. Transplanted XY germ cells produce spermatozoa in testes of XXY mice. Int. J. Androl. 33: 581-587.
8. Chen, T., et al. 2011. Rapamycin and other longevity-promoting compounds enhance the generation of mouse induced pluripotent stem cells. Aging Cell 10: 908-911.
9. Bhave, V.S., et al. 2011. Genes inducing iPS phenotype play a role in hepatocyte survival and proliferation *in vitro* and liver regeneration *in vivo*. Hepatology 54: 1360-1370.
10. Li, Q.R., et al. 2011. Large scale phosphoproteome profiles comprehensive features of mouse embryonic stem cells. Mol. Cell. Proteomics 10: M110.001750.
11. Asumda, F.Z. and Chase, P.B. 2011. Age-related changes in rat bone-marrow mesenchymal stem cell plasticity. BMC Cell Biol. 12: 44.