SANTA CRUZ BIOTECHNOLOGY, INC.

Nanog (H-155): sc-33759

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.

SOURCE

Nanog (H-155) is a rabbit polyclonal antibody raised against amino acids 151-305 mapping at the C-terminus of Nanog of human 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 (H-155) is recommended for detection of Nanog of human 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); also recommended for detection of NanogP1 and NanogP8.

Suitable for use as control antibody for Nanog siRNA (h): sc-43958, Nanog shRNA Plasmid (h): sc-43958-SH and Nanog shRNA (h) Lentiviral Particles: sc-43958-V.

Molecular Weight of Nanog: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

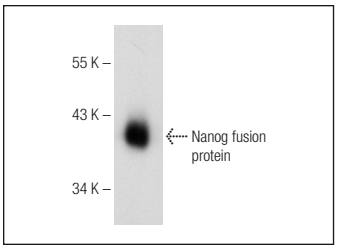
RESEARCH USE

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

STORAGE

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

DATA



Nanog (H-155): sc-33759. Western blot analysis of human recombinant Nanog fusion protein.

SELECT PRODUCT CITATIONS

1. Valfrè di Bonzo, L., et al. 2008. Human mesenchymal stem cells as a two-edged sword in hepatic regenerative medicine: engraftment and hepatocyte differentiation versus profibrogenic potential. Gut 57: 223-231.
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3. Kita, K., et al. 2010. Isolation and characterization of mesenchymal stem cells from the sub-amniotic human umbilical cord lining membrane. Stem Cells Dev. 19: 491-502.
4. Kalbermatten, D.F., et al. 2011. Neurotrophic activity of human adipose stem cells isolated from deep and superficial layers of abdominal fat. Cell Tissue Res. 344: 251-260.
5. Scassa, M.E., et al. 2011. Human embryonic stem cells and derived contractile embryoid bodies are susceptible to Coxsakievirus B infection and respond to interferon Iβ treatment. Stem Cell Res. 6: 13-22.
6. Horák, D., et al. 2011. Pentapeptide-modified poly(N,N-diethylacrylamide) hydrogel scaffolds for tissue engineering. J. Biomed. Mater. Res. Part B Appl. Biomater. 98: 54-67.
7. Jeter, C.R., et al. 2011. NANOG promotes cancer stem cell characteristics and prostate cancer resistance to androgen deprivation. Oncogene 30: 3833-3845.
8. Romorini, L., et al. 2012. Activation of apoptotic signalling events in human embryonic stem cells upon Coxsackievirus B3 infection. Apoptosis 17: 132-142.
9. Kang, H., et al. 2014. Mineralized gelatin methacrylate-based matrices induce osteogenic differentiation of human induced pluripotent stem cells. Acta Biomater. 10: 4961-4970.
10. Kandasamy, K., et al. 2014. Polysulfone membranes coated with polymerized 3,4-dihydroxy-l-phenylalanine are a versatile and cost-effective synthetic substrate for defined long-term cultures of human pluripotent stem cells. Biomacromolecules 15: 2067-2078.