

Nanos2 (M-62): sc-292083

BACKGROUND

Nanos2, also known as NOS2, is a 138 amino acid protein that contains one Nanos-type zinc finger. The nanos-type zinc finger is comprised of two C2HC motifs, each of which are capable of binding one molecule of zinc and each of which work in tandem to play essential roles in translational regulation events. Expressed specifically in male germ cells, Nanos2 is essential for spermatogonia formation and is required to support the self-renewal, proliferation and overall development of proximal germ cells. Additionally, Nanos2 is thought to regulate the translation of target mRNAs, possibly by associating with the 3'-UTR of select transcripts. The gene encoding human Nanos2 maps to chromosome 19, which is the genetic home for a number of immunoglobulin superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608228. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Jaruzelska, J., et al. 2003. Conservation of a Pumilio-Nanos complex from *Drosophila* germ plasm to human germ cells. *Dev. Genes Evol.* 213: 120-126.
3. Tsuda, M., et al. 2003. Conserved role of Nanos proteins in germ cell development. *Science* 301: 1239-1241.
4. D'Agostino, I., et al. 2006. Translational repression restricts expression of the *C. elegans* Nanos homolog NOS-2 to the embryonic germline. *Dev. Biol.* 292: 244-252.
5. Tsuda, M., et al. 2006. Implication of Nanos2-3'UTR in the expression and function of Nanos2. *Mech. Dev.* 123: 440-449.
6. Suzuki, A., et al. 2007. Functional redundancy among Nanos proteins and a distinct role of Nanos2 during male germ cell development. *Development* 134: 77-83.
7. Saga, Y. 2008. Mouse germ cell development during embryogenesis. *Curr. Opin. Genet. Dev.* 18: 337-341.

CHROMOSOMAL LOCATION

Genetic locus: Nanos2 (mouse) mapping to 7 A3.

SOURCE

Nanos2 (M-62) is a rabbit polyclonal antibody raised against amino acids 1-62 mapping at the N-terminus of Nanos2 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-292083 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

Nanos2 (M-62) is recommended for detection of Nanos2 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 Nanos2 siRNA (m): sc-75867, Nanos2 shRNA Plasmid (m): sc-75867-SH and Nanos2 shRNA (m) Lentiviral Particles: sc-75867-V.

Nanos2 (M-62) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Nanos2: 18 kDa.

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.

STORAGE

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

PROTOCOLS

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