

Nanos1 Antibody

Nanos1 (IN): Nanos homolog 1, NOS1

CATALOG No.:4685

BACKGROUND:

Nanos1 is one of three known mammalian homologs to the *Drosophila* gene *nanos* (1,2). Nanos1 is an RNA-binding protein containing a zinc-finger motif and is expressed in the developing nervous system and continues in the adult brain (3). Interestingly, unlike mice deficient in either *nanos2* or *nanos3*, mice lacking the *nanos1* gene develop normally with no sign of abnormalities. Recently it has been found that expression of *nanos1* mRNA is down-regulated by E-cadherin in a human breast cancer cell line and the amino-terminal domain on Nanos1 interacts with the E-cadherin-binding protein p120ctn. Furthermore, overexpression of Nanos1 in human colorectal DLD1 cancer cells functionally abolished cell-cell adhesion, allowing the cancer cells to develop strong migratory and invasive properties. These results suggest that targeting Nanos1 might prove an effective strategy in the treatment of E-cadherin-negative tumors (4).

SOURCE:

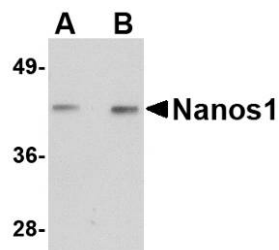
Rabbit polyclonal Nanos1 antibody was raised against a 14 amino acid peptide from near the center of human Nanos1 (GenBank accession no. Q8WY41).

APPLICATIONS:

Nanos1 antibody can be used for detection of Nanos1 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) Rat brain tissue lysate can be used as positive control. Nanos1 antibody is human, mouse and rat reactive. **For research use only.**

STORAGE:

Nanos1 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of Nanos1 in rat brain tissue lysate with Nanos1 antibody at (A) 1 and (B) 2 µg/ml.

RELATED PRODUCTS:

Blocking Peptide, Catalog No. **4685P**.
Rat Brain Tissue Lysate, Catalog No. **1463**.
Nanos1 Antibody (NT), Catalog No. **4683**.
Nanos2 Antibody (NT), Catalog No. **4647**.
Nanos3 Antibody (CT), Catalog No. **4653**.

REFERENCES:

1. Jaruleska J, Kotecki M, Kusz K, et al. Conservation of a Pumilio-Nanos complex from *Drosophila* germ plasm to human germ cells. *Dev. Genes Evol.* 2003; 213:120-6.
2. Tsuda M, Sasaoka Y, Kiso M, et al. Conserved role of nanos proteins in germ cell development. *Science* 2003; 301:1239-41.
3. Haraguchi S, Tsuda M, Kitajima S, et al. Nanos1: a mouse nanos gene expressed in the central nervous system is dispensable for normal development. *Mech. Dev.* 2003; 120:721-31.
4. Strumane K, Bonnomet A, Stove A, et al. E-cadherin regulates human Nanos1, which interacts with p120ctn and induces tumor cell migration and invasion. *Cancer Res.* 2006; 66:10007-15.
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