

## Nanos3 Antibody

*Nanos3 (CT): Nanos homolog 3*

**CATALOG No.: 4653**

### BACKGROUND:

Nanos is a zinc-finger containing, RNA-binding protein that has been implicated in germ cell development in both invertebrates and vertebrates (1,2). In drosophila, Nanos represses apoptosis during development to ensure proper germ-line development (3). Unlike Nanos1 whose expression in mice is dispensable, the Nanos2 and Nanos3 proteins are required for germ cell development (4,5). Nanos2-null primordial germ cells (PGCs) die only in the male gonads and show no defects in females, while Nanos3-null PGCs are lost during the migration stage regardless of sex (4). Nanos2 and Nanos3 have distinct expression patterns during embryo development, suggesting that these two proteins do not have redundant functions. However, expression of Nanos2 can at least partially replace Nanos3 function in a Nanos3-null background. Nanos3 expression can not rescue Nanos2-null defects (5). This Nanos3 antibody will not cross-react with either Nanos 1 or Nanos2.

### SOURCE:

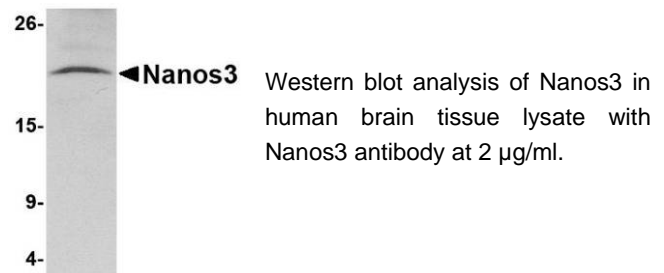
Rabbit polyclonal Nanos3 antibody was raised against a 16 amino acid peptide near the carboxy terminus of the human Nanos3 (GenBank accession no. P60323).

### APPLICATION:

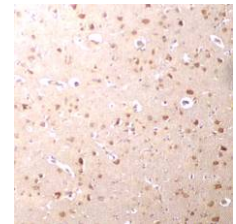
Nanos3 antibody can be used for detection of Nanos3 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) Human brain tissue lysate can be used as positive control. Nanos3 antibody is human, mouse and rat reactive. **For research use only.**

### STORAGE:

Nanos3 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Immunohistochemistry of Nanos3 in human brain tissue with Nanos3 antibody at 2.5 µg/ml.



### RELATED PRODUCTS:

Blocking Peptide, Catalog No. **4653P**.  
Human Brain Tissue Lysate, Catalog No. **1303**.  
Nanos3 Antibody (NT), Catalog No. **4647**.  
Nanos1 Antibody (NT), Catalog No. **4683**.  
Nanos2 Antibody (CT), Catalog No. **4645**.

### REFERENCES:

1. Lehmann R and Nusslein-Volhard C. The maternal gene nanos has a central role in posterior pattern formation of the drosophila embryo. *Development* 1991; 112:679-91.
2. Tsuda M, Sasaoka Y, Kiso M, et al. Conserved role of nanos proteins in germ cell development. *Science* 2003; 301:1239-41.
3. Sato K, Hayashi Y, Ninomiya Y, et al. Maternal Nanos represses hid/skl-dependent apoptosis to maintain the germ line in Drosophila embryos. *Proc. Natl. Acad. Sci. USA* 2007; 104:7455-60.
4. 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.
5. Suzuki A, Tsuda M, and Saga Y. Functional redundancy among Nanos proteins and a distinct role of Nanos2 during male germ cell development. *Development* 2007; 134:77-83.  
(08-01D)