

## Anti-GENA (germ cell-specific antigen) antibody, rat clone TRA98

Cat.#73-003, Size 100 ug

### Background:

A monoclonal antibody TRA98 recognizes a mouse testicular germ cell-specific antigen (1). In adult tissues, bands of 60-100 kDa proteins are detected only in the testis by Western blotting analysis with TRA98 (Fig. 1). The signals are observed in male and female embryos after embryonic day 12.5. The signal in male is detected during development of germ cells and also after birth, but the signal in female disappears by 5 days after birth. The antigen is localized only in the nuclear fraction of testicular germ cells and this antibody can be used for immunohistochemical staining of testicular germ cells (1, 2).

### Specifications:

**Reactivity:** mouse

**Immunogen:** Cell lysate of adult mouse testis

**Form:** Purified IgG (1 mg/ml) in PBS(-), 50% glycerol. Azide and carrier free)

**Isotype:** Rat IgG2a

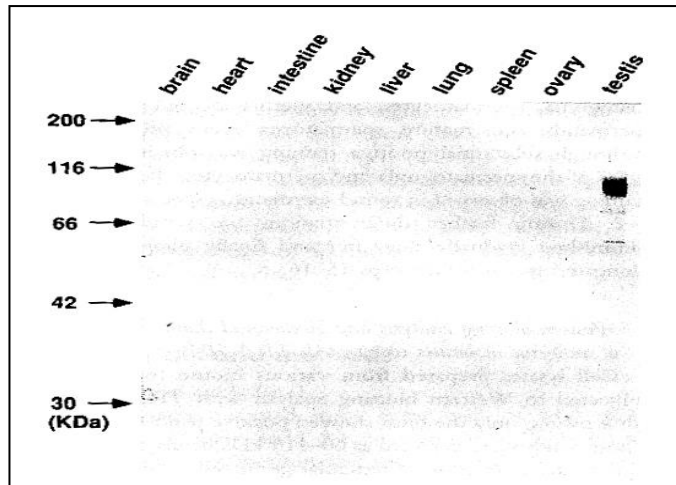
**Storage:** Ship at 4°C and store at -20°C (Avoid freezing by storing below -20°C)

### Applications:

- Western blotting (1/1,000- 5,000)
- Immunohistochemical staining (1/500)

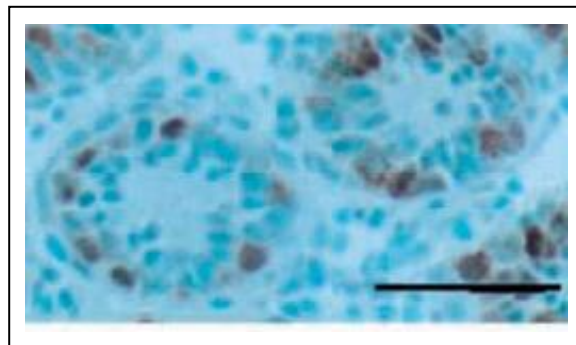
### References: This product has been used in the following publications.

1. Tanaka H *et al.* A germ cell-specific nuclear antigen recognized by a monoclonal antibody raised against mouse testicular germ cells. *Int J Androl* 20: 361-366 (1997) PMID: [9568529](#) **WB (mouse)**
2. Ohta H *et al.* Regulation of proliferation and differentiation in spermatogonial stem cells: the role of c-kit and its ligand SCF. *Development* 127: 2125-2131 (2000) PMID: [10769236](#) **IHC (mouse)**
3. Nicholas CR *et al.* Transplantation directs oocyte maturation from embryonic stem cells and provides a therapeutic strategy for female infertility. *Hum Mol Genet.* 2009 Nov 15;18(22):4376-89. **IHC-P (mouse)**
4. Nicholas CR *et al.* Intact fetal ovarian cord formation promotes mouse oocyte survival and development. *BMC Developmental Biology* 2010;10:2. PMID: [20064216](#) **IHC-P (mouse)**
5. Lin FJ *et al.* Ikkap/Elp1 deficiency causes male infertility by disrupting meiotic progression. [PLoS Genet.](#) 2013 May;9(5):e1003516. **IHC (mouse)**
6. Yamaguchi S. *et al.* Tet1 controls meiosis by regulating meiotic gene expression. [Nature.](#) 2012 Dec 20;492(7429):443-7. **IHC (mouse)**



**Fig.1. Western blot analysis with TRA98 of various mouse tissues.**

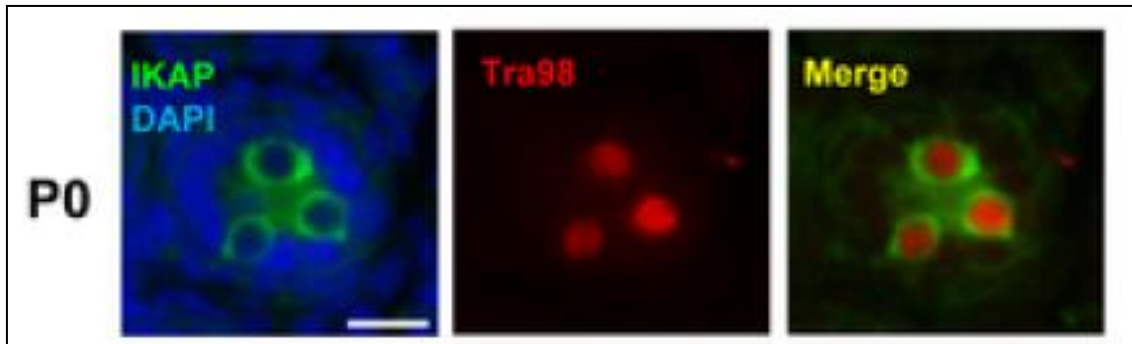
The antibody was used at 1 ug/ml The tissue homogenate samples were applied at 100 ug protein per lane. Note that TRA98 is detected only in testis lysate.



**Fig.2. Immunohistochemical staining of a 7-day-old testis with germ cell-specific antibody, TRA98.**

Frozen sections were reacted with the antibody and the antibody was detected by the avidin-biotin-peroxidase complex method with hydrogen peroxide and diaminobenzidine.

Scale bar; 50  $\mu$ m



**Fig.3 Colocalization of germ cell specific marker, Tra98, with IKAP at P0 during spermatogenesis as shown by immunohistological staining.** Image from [PLoS Genet.](https://doi.org/10.1371/journal.pone.0100351) 2013 May;9(5):e1003516 authored by Lin FJ et al.

**Related products:**

#73-001 Anti-SLA (spermatid specific antigen) antibody, clone TRA54