

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

73-003 100 µg

Shipping and Storage: Shipped at 4°C or -20°C and stored at -20°C

Immunogen: Cell lysate of adult mouse testis. Rat hybridoma clone TRA98 was established by Dr. Tanaka H and Prof. Nishimune Y at Osaka University

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

Isotype: Rat IgG2a κ

Reactivity: mouse

Applications:

1. Western blotting (1/1,000- 1/5,000)
2. Immunoprecipitation (1/200)
2. Immunofluorescence staining (1/400)
3. Immunohistochemical staining (1/200-1/500)
4. Flow Cytometry

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).

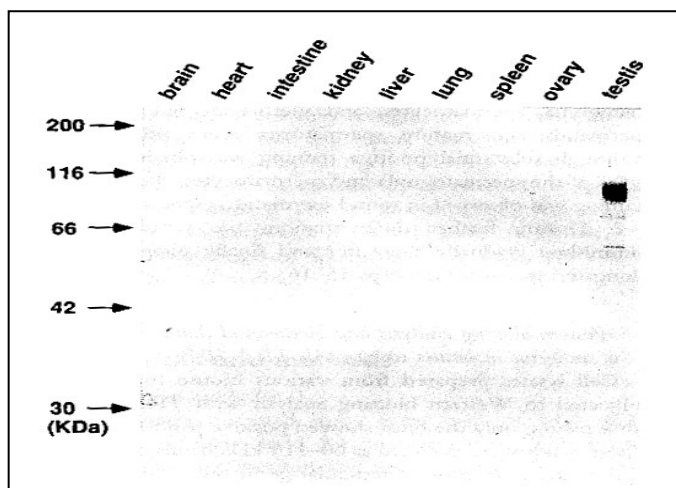


Fig.1. Western blot analysis with TRA98 of various mouse tissues.

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

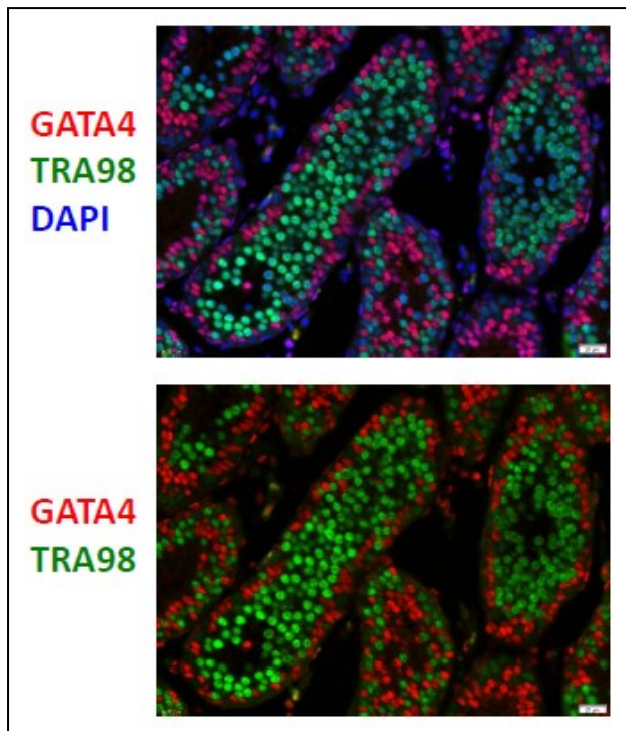


Fig.2. Immunohistochemical staining of a 10-day-old testis with germ cell-specific antibody, TRA98.

Sections of 10-day-old mouse testis were fixed with 4% paraformaldehyde and embedded in paraffin. After antigen retrieval by boiling for 10 min in 10 mM citrate buffer (pH 6), they were reacted with the anti-TRA98 antibody (Green) at 1/400 dilution and anti-GATA4 antibody (Red). As the 2nd antibody, Donkey anti-rat Alexa Fluor488 and Donkey anti-rabbit Alexa Fluor594 were used. DNA was stained with DAPI (Blue) in the above figure.

Anti-GATA antibody stains nuclei of Sertoli cells in seminiferous tubule while anti-TRA98 stains reproductive cells.

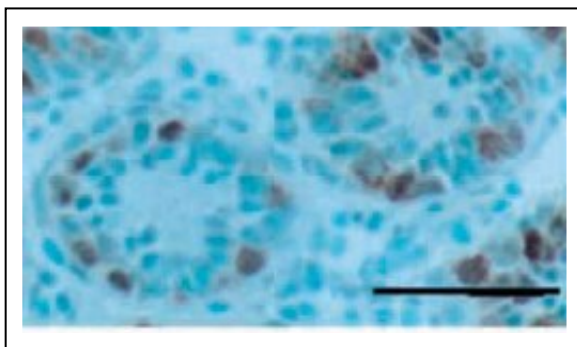


Fig.3. Immunohistochemical staining of a 7-day-old testis with germ cell-specific antibody, TRA98.

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 μ m

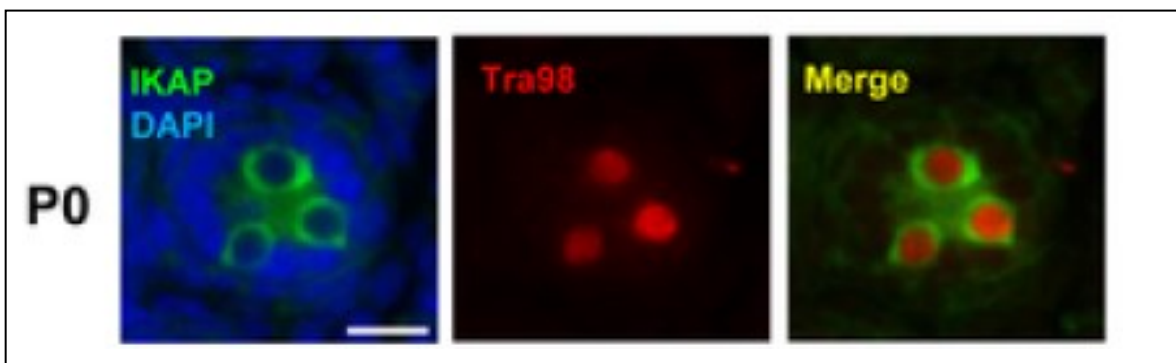


Fig.4 Colocalization of germ cell specific marker, Tra98, with IKAP at P0 during spermatogenesis as shown by immunohistological staining. Image from . [PLoS Genet.](https://doi.org/10.1371/journal.pone.0100351) 2013 May;9(5):e1003516 authored by Lin FJ et al.

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

References: This product has been used in the following publications (77).

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