

## Anti-ADAM1B antibody, rat monoclonal (#158)

Cat.#73-007, Size:100 ug

### Background:

May play a role in spermatogenesis, sperm maturation and fertilization. Molecular weight inferred from DNA sequence of Adam1B is 89,369 with 806 amino acids. N-terminal signal peptide with 33 amino acids from this protein is processed to give propeptide, which undergoes further processing. By western blotting, ADAM1B is detected in testis extract at 120 kDa position, which is due to glycosylation and in sperm extract at 60 kDa (Fig.1 & 2. Ref. 1 & 2). The prodomain and the metalloprotease-like domain are cleaved during the epididymal maturation of the spermatozoa

### Specification:

**Reactivity:** Mouse ADAM1B (Non reactivity with ADAM1A was confirmed by WB using recombinant ADAM1A and ADAM1B proteins).

**Immunogen:** Mouse sperm

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

**Storage:** Shipped at 4°C and store at -20°C (Do not store below -20°C).

### Applications

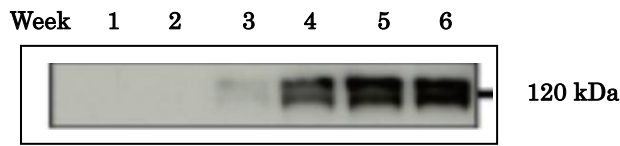
- Western blotting (1/100~1/500)
- Immunohistochemistry (1/100~1/300)
- Immunofluorescence staining (to be determined by user)

\*For IF, clone #57 (BioAcademia 73-010) is recommended

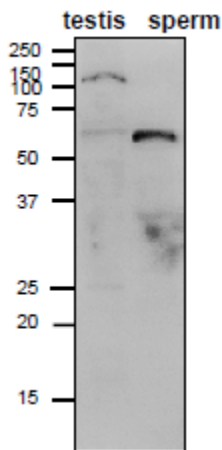
**Database Links:** UniProtKB [Q8R534](#) (mouse ADAM1b)

**Reference:** This antibody has been used in the following publications.

1. Ikawa M. et al. Calsperin is a testis-specific chaperone required for sperm fertility. [J Biol Chem.](#) 2011 ;286:5639-46. PMID: [21131354](#) **WB (mouse)**
2. Tokuhiko K. et al. Protein disulfide isomerase homolog PDILT is required for quality control of sperm membrane protein ADAM3 and male fertility. [Proc Natl Acad Sci U S A.](#) 2012 ;109:3850-5. PMID: [22357757](#) **WB (mouse)**
3. Yamaguchi R et al. Mice expressing aberrant sperm-specific protein PMIS2 produce normal-looking but fertilization-incompetent spermatozoa. [Mol Biol Cell.](#) 2012 Jul;23(14):2671-9. PMID: [22621904](#) **WB (mouse)**



**Fig.1 Differentiation stage-specific expression of ADAM1B in mouse testis as examined by Western blotting with anti-ADAM1B antibody.** Testis lysates collected from mice of different ages were examined by Western blotting. ADAM1B appeared as a faint signal at 3 weeks of age.

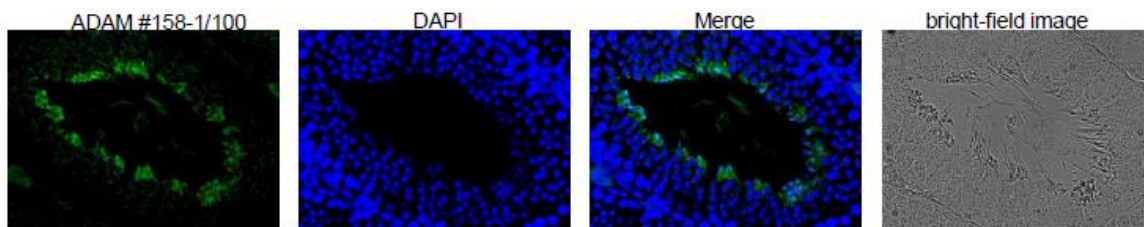


**Fig.2 Western blot analysis of Adam1B in mouse testis and sperm lysates.**

The antibody was used at 1/100 dilution.

The Adam1B synthesized in testis (120 kDa) is proteolytically processed into smaller form (60 kDa) in sperm during the epididymal maturation of the spermatozoa.

By western blotting, ADAM1B is detected in testis extract at 120 kDa position, which is due to glycosylation and larger than predicted size of 89 kDa from the sequence.



**Fig.3 Immunohistological staining of ADAM1B in mouse testis using anti-ADAM1B antibody (#158).** A section of formalin fixed and paraffin embedded mouse testis was treated with the anti-ADAM1B antibody (#158) at 1/100 dilution after deparaffization and antigen retrieval. The 2<sup>nd</sup> antibody, anti-rat IgG conjugated with Alexa Fluor 488 (Abcam) was used at 1/1,000 dilution. DNA was stained with DAPI and the merged image was shown (Merge). The bright field microscopic picture of the same region was shown on the right.

**Related product:**

73-010 anti-mouse ADAM1B (clone #57) IF, IHC