Anti-ADAM1B antibody, rat monoclonal (#158)

Product code	73-007
Size	100 µg
Storage	-20℃
Concentration	1.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from hybridoma cell culture medium.
Immunogen	Mouse sperm
Isotype	Rat IgG2aκ
Reactivity	Mouse ADAM1B (Non reactivity with ADAM1A was confirmed by WB using recombinant ADAM1A and ADAM1B proteins).
Special notes	N/A
Application	1. Western blotting (1/100~1/500) 2. Immunofluorescence staining (1/300) *For IF, clone #57 (BioAcademia 73-010) is recommended
Background	May play a role in spermatogenesis, sperm maturation and fertilization. MolecularForms: 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.
Data Link	UniProtKB Q8R534 (mouse ADAM1b)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

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Data Images: 73-007 Anti-ADAM1B antibody, rat monoclonal (#158)

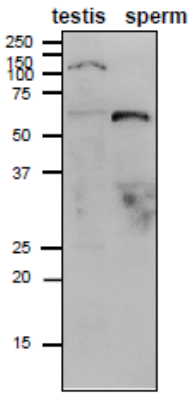

Fig.1 Western blot analysis of Adam1B in mouse testis and sperm lysates.

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.

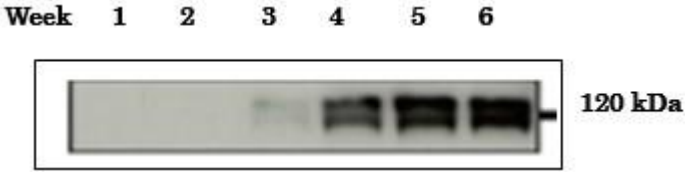

Fig.2 Differentiation stage-specific expression of ADAM1B in mouse testis as examined by Western blotting with anti-ADAM1B antibody.

Testis lysates collected from mice of different ages were examined by Western blotting. ADAM1B appeared as a faint signal at 3 weeks of age

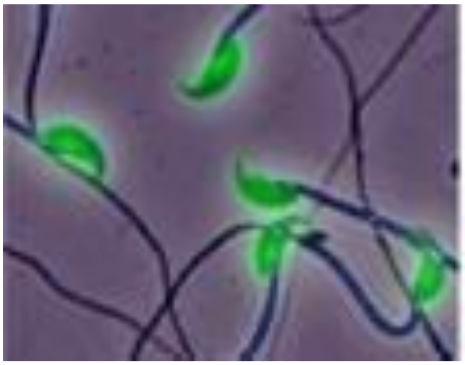

Fig.3 Immunofluorescent staining of ADAM1B in sperm.

Fresh sperm collected from the epididymis of mice were fixed in 4% paraformaldehyde and then immunostained with the anti-ADAM1B antibody (#57) at 1/300 dilution.

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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,IF (mouse)
2. Tokuhiro 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-incompetentspermatozoa. Mol Biol Cell. 2012 Jul;23(14):2671-9. PMID: 22621904 WB (mouse)

Related product

73-010 Anti-ADAM1B antibody, rat monoclonal (#57)

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