

ADAM3 (F-4): sc-365288



The Power to Question

BACKGROUND

ADAMs (a disintegrin and metalloproteinase domain), also known as MDCs (metalloproteinase, disintegrin, and cysteine-rich domain) or cellular disintegrins, are a family of proteins that are expressed in numerous different tissues. They catalyze proteolysis, adhesion, fusion and intracellular signaling. ADAMs are membrane-anchored, glycosylated, Zn²⁺ dependent proteases and there are over 30 different members in the family with many diverse functions. ADAM3, also called cyritestin, is exclusively expressed on the surface of sperm. In the early development of sperm, ADAM3 forms a complex with ADAM2. Disruption of this complex can impair the function and structure of ADAM3. ADAM3 plays a significant role in sperm-oocyte binding. Sperm lacking functional ADAM3 cannot bind to the zona pellucida and fertilization cannot take place.

CHROMOSOMAL LOCATION

Genetic locus: ADAM33 (human) mapping to 20p13; Adam3 (mouse) mapping to 8 A2.

SOURCE

ADAM3 (F-4) is a mouse monoclonal antibody raised against amino acids 461-595 mapping within an internal region of ADAM3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ADAM3 (F-4) is available conjugated to agarose (sc-365288 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365288 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365288 PE), fluorescein (sc-365288 FITC), Alexa Fluor® 488 (sc-365288 AF488), Alexa Fluor® 546 (sc-365288 AF546), Alexa Fluor® 594 (sc-365288 AF594) or Alexa Fluor® 647 (sc-365288 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365288 AF680) or Alexa Fluor® 790 (sc-365288 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ADAM3 (F-4) is recommended for detection of ADAM3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ADAM33 siRNA (h): sc-41422, ADAM3 siRNA (m): sc-61941, ADAM33 shRNA Plasmid (h): sc-41422-SH, ADAM3 shRNA Plasmid (m): sc-61941-SH, ADAM33 shRNA (h) Lentiviral Particles: sc-41422-V and ADAM3 shRNA (m) Lentiviral Particles: sc-61941-V.

Molecular Weight of ADAM3: 42/110 kDa.

Positive Controls: mouse testis extract: sc-2405 or rat testis extract: sc-2400.

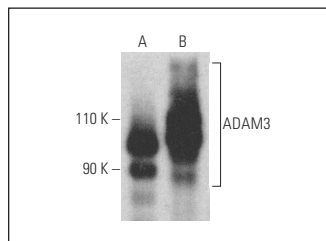
RESEARCH USE

For research use only, not for use in diagnostic procedures.

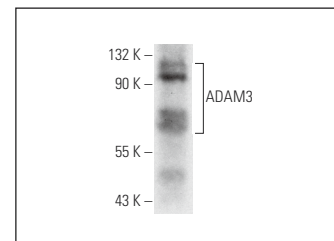
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



ADAM3 (F-4) HRP: sc-365288 HRP. Direct western blot analysis of ADAM3 expression in rat testis (A) and mouse testis (B) tissue extracts.



ADAM3 (F-4): sc-365288. Western blot analysis of ADAM3 expression in mouse testis tissue extract.

SELECT PRODUCT CITATIONS

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- Zhang, H., et al. 2020. Male fertility in *Mus musculus* requires the activity of TRYX5 in sperm migration into the oviduct. *J. Cell. Physiol.* 235: 6058-6072.
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- Larasati, T., et al. 2020. Tmprss12 is required for sperm motility and uterotubal junction migration in mice. *Biol. Reprod.* 103: 254-263.
- Lee, S., et al. 2020. Normal fertility in male mice lacking ADAM32 with testis-specific expression. *Reprod. Biol.* 20: 589-594.
- Fujihara, Y., et al. 2021. The conserved fertility factor SPACA4/Bouncer has divergent modes of action in vertebrate fertilization. *Proc. Natl. Acad. Sci. USA* 118: e2108777118.
- Xiong, W., et al. 2021. Dissecting the PRSS37 interactome and potential mechanisms leading to ADAM3 loss in PRSS37-null sperm. *J. Cell Sci.* 134: jcs258426.
- Sakurai, N., et al. 2024. CRISPR/Cas9-mediated disruption of lipocalins, Ly6g5b, and Ly6g5c causes male subfertility in mice. *Andrology* 981-990.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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