

# ADAM4 (D-4): sc-390853

## BACKGROUND

ADAMs (disintegrin and metalloproteinase domain), also known as MDCs (metalloproteinase, disintegrin, and cysteine-rich domain) or cellular disintegrins are a family of proteins that are ubiquitously expressed. They catalyze proteolysis, adhesion, fusion and intracellular signaling. ADAMs are membrane-anchored, glycosylated, Zn<sup>2+</sup> dependent proteases, and there are over 30 different members in the family with many diverse functions. ADAM1–6 localize to the testis, are developmentally regulated, and are involved in spermatogenesis and sperm-egg binding and fusion. ADAM4 expression occurs postmeiotically in spermatids. In addition to its expression in the testis, ADAM4 is also found at low levels in all other adult tissues. Peptides targeting the disintegrin domain of ADAM4 do not disturb spermatogenic cell attachment to Sertoli cell surfaces.

## REFERENCES

1. Cho, C., et al. 1996. Chromosomal assignment of four testis-expressed mouse genes from a new family of transmembrane proteins (ADAMs) involved in cell-cell adhesion and fusion. *Genomics* 34: 413-417.
2. Yuan, R., et al. 1997. A role for the disintegrin domain of cyritestin, a sperm surface protein belonging to the ADAM family, in mouse sperm-egg plasma membrane adhesion and fusion. *J. Cell Biol.* 137: 105-112.
3. Sagane, K., et al. 1998. Metalloproteinase-like, disintegrin-like, cysteine-rich proteins MDC2 and MDC3: novel human cellular disintegrins highly expressed in the brain. *Biochem. J.* 334: 93-98.
4. Sagane, K., et al. 1999. Cloning and chromosomal mapping of mouse ADAM11, ADAM22 and ADAM23. *Gene* 236: 79-86.
5. Cal, S., et al. 2000. ADAM 23/MDC3, a human disintegrin that promotes cell adhesion via interaction with the  $\alpha v \beta 3$  integrin through an RGD-independent mechanism. *Mol. Biol. Cell* 11: 1457-1469.

## CHROMOSOMAL LOCATION

Genetic locus: Adam4 (mouse) mapping to 12 D1.

## SOURCE

ADAM4 (D-4) is a mouse monoclonal antibody raised against amino acids 577-636 mapping near the C-terminus of ADAM4 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ADAM4 (D-4) is available conjugated to agarose (sc-390853 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390853 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390853 PE), fluorescein (sc-390853 FITC), Alexa Fluor<sup>®</sup> 488 (sc-390853 AF488), Alexa Fluor<sup>®</sup> 546 (sc-390853 AF546), Alexa Fluor<sup>®</sup> 594 (sc-390853 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-390853 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-390853 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-390853 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

ADAM4 (D-4) is recommended for detection of ADAM4 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 ADAM4 siRNA (m): sc-61945, ADAM4 shRNA Plasmid (m): sc-61945-SH and ADAM4 shRNA (m) Lentiviral Particles: sc-61945-V.

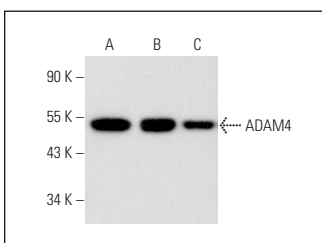
Molecular Weight of ADAM4: 52 kDa.

Positive Controls: F9 cell lysate: sc-2245, BC<sub>3</sub>H1 cell lysate: sc-2299 or A-10 cell lysate: sc-3806.

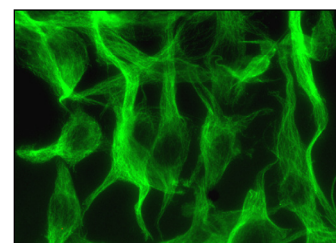
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



ADAM4 (D-4): sc-390853. Western blot analysis of ADAM4 expression in F9 (A), BC<sub>3</sub>H1 (B) and A-10 (C) whole cell lysates.



ADAM4 (D-4): sc-390853. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.