SANTA CRUZ BIOTECHNOLOGY, INC.

ADAM4 (M-60): sc-50484

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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^{2+}-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 αVβ3 Integrin through an RGD-independent mechanism. Mol. Biol. Cell 11: 1457-1469.

CHROMOSOMAL LOCATION

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

SOURCE

ADAM4 (M-60) is a rabbit polyclonal antibody raised against amino acids 577-636 mapping near the C-terminus of ADAM4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

ADAM4 (M-60) is recommended for detection of ADAM4 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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 ADAM4 siRNA (m): sc-61945, ADAM4 shRNA Plasmid (m): sc-61945-SH and ADAM4 shRNA (m) Lentiviral Particles: sc-61945-V.

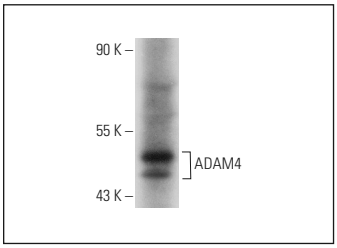
Molecular Weight of ADAM4: 52 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ADAM4 (M-60): sc-50484. Western blot analysis of ADAM4 expression in mouse brain tissue extract.

RESEARCH USE

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