



ADAM5 (F-16): sc-66719

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, Zn²⁺ 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. ADAM5 is expressed on the sperm surface. The ADAM5 precursor originates in the testis and is processed during epididymal maturation. Evidence suggests that ADAM5 plays a critical role in fertilization through a significant expressional relationship with ADAM2 and 3.

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.
6. Takada, H., et al. 2005. ADAM23, a possible tumor suppressor gene, is frequently silenced in gastric cancers by homozygous deletion or aberrant promoter hypermethylation. *Oncogene* 24: 8051-8060.
7. Tres, L.L., et al. 2005. The ADAM-integrin-tetraspanin complex in fetal and postnatal testicular cords. *Birth Defects Res. C Embryo Today.* 75: 130-141.
8. Kierszenbaum, A.L., et al. 2006. Role of integrins, tetraspanins and ADAM proteins during the development of apoptotic bodies by spermatogenic cells. *Mol. Reprod. Dev.* 73: 906-917.
9. Kim, T., et al. 2006. Expression and relationship of male reproductive ADAMs in mouse. *Biol. Reprod.* 74: 744-750.

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.

CHROMOSOMAL LOCATION

Genetic locus: ADAM5 (human) mapping to 8p11.23; Adam5 (mouse) mapping to 8 A2.

SOURCE

ADAM5 (F-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ADAM5 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.

Blocking peptide available for competition studies, sc-66719 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ADAM5 (F-16) is recommended for detection of ADAM5 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 ADAM5 siRNA (m): sc-61947.

Molecular Weight of ADAM5: 84 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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