SANTA CRUZ BIOTECHNOLOGY, INC.

ADAM19 (14J12): sc-73687

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The Power to Question

BACKGROUND

The ADAM (a disintegrin and metalloprotease) protein family, which includes over 30 membrane-anchored, glycosylated, Zn^{2+} dependent proteases, plays a role in cell-cell and cell-matrix interface related processes, including fertilization, muscle fusion, secretion of TNFα (tumor necrosis factor α) and modulation of the neurogenic function of Notch and Delta. The ADAM proteins possess a signal-domain, a pro-domain, a metalloprotease domain, a disintegrin domain (integrin ligand), a cysteine-rich region, an epidermal growth factor-like domain, a transmembrane domain and a cytoplasmic tail. ADAMs are expressed in a wide range of mammalian tissues and several are abundantly expressed in the male reproductive tract. Expression of ADAM19, also designated Meltrin-β, is highest in the peripheral nervous system during embryogenesis, but is also apparent in placenta, brain, heart, lung, leukocytes and SW480 cells. ADAM19 also serves as a dendritic cell marker. Truncation of ADAM19 in its cysteine-rich domain is necessary to exert its proteolytic activity on specific substrates, including α2-macroglobulin.

REFERENCES

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2. Stone, A.L., et al. 1999. Structure-function analysis of the ADAM family of disintegrin-like and metalloproteinase-containing proteins (review). J. Protein Chem. 18: 447-465.
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4. Fritsche, J., et al. 2000. Molecular cloning and characterization of a human metalloprotease disintegrin—a novel marker for dendritic cell differentiation. Blood 96: 732-739.
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7. Kurisaki, T., et al. 2002. Meltrin β mini, a new ADAM19 isoform lacking metalloprotease and disintegrin domains, induces morphological changes in neuronal cells. FEBS Lett. 532: 419-422.
8. Kang, T., et al. 2002. Autolytic processing at Glu586-Ser587 within the cysteine-rich domain of human adamalysin 19/disintegrin-metalloproteinase 19 is necessary for its proteolytic activity. J. Biol. Chem. 277: 48514-48522.

CHROMOSOMAL LOCATION

Genetic locus: Adam19 (mouse) mapping to 11 B1.1.

SOURCE

ADAM19 (14J12) is a rat monoclonal antibody raised against amino acids 205-705 of ADAM19 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

ADAM19 (14J12) is recommended for detection of amino acids 588-705 of ADAM19 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

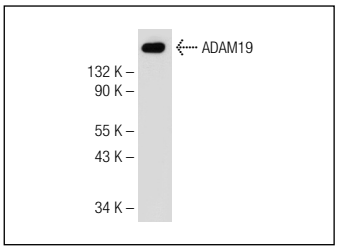
Suitable for use as control antibody for ADAM19 siRNA (m): sc-41418, ADAM19 shRNA Plasmid (m): sc-41418-SH and ADAM19 shRNA (m) Lentiviral Particles: sc-41418-V.

Molecular Weight of ADAM19 precursor: 115 kDa.

Molecular Weight of mature ADAM19: 87 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

DATA



ADAM19 (14J12): sc-73687. Western blot analysis of ADAM19 expression in NIH/3T3 whole cell lysate.

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 for detailed protocols and support products.