SANTA CRUZ BIOTECHNOLOGY, INC.

ADAM22 (F-3): sc-515300

SANTA CRUZ BIOTECHNOLOGY

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. ADAM22 and ADAM23 (designated MDC2 and MDC3, respectively) are structurally similar proteins that contain a disrupted zinc-binding motif, and both are highly expressed in brain. The genes encoding human ADAM22 and ADAM23 map to chromosomes 7q21.12 and 2q33, respectively.

REFERENCES

1. Wolfsberg, T.G., et al. 1995. ADAM, a novel family of membrane proteins containing a disintegrin and metalloprotease domain: multipotential functions in cell-cell and cell-matrix interactions. J. Cell Biol. 131: 275-278.
2. 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.
3. 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.
4. Sagane, K., et al. 1999. Cloning and chromosomal mapping of mouse ADAM11, ADAM22 and ADAM23. Gene 236: 79-86.
5. Poindexter, K., et al. 1999. The identification of seven metalloproteinase-disintegrin (ADAM) genes from genomic libraries. Gene 237: 61-70.
6. Primakoff, P., et al. 2000. The ADAM gene family: surface proteins with adhesion and protease activity. Trends Genet. 16: 83-87.

CHROMOSOMAL LOCATION

Genetic locus: ADAM22 (human) mapping to 7q21.12; Adam22 (mouse) mapping to 5 A1.

SOURCE

ADAM22 (F-3) is a mouse monoclonal antibody raised against amino acids 369-428 mapping within an internal region of ADAM22 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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.

APPLICATIONS

ADAM22 (F-3) is recommended for detection of ADAM22 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 ADAM22 siRNA (h): sc-41419, ADAM22 siRNA (m): sc-41420, ADAM22 shRNA Plasmid (h): sc-41419-SH, ADAM22 shRNA Plasmid (m): sc-41420-SH, ADAM22 shRNA (h) Lentiviral Particles: sc-41419-V and ADAM22 shRNA (m) Lentiviral Particles: sc-41420-V.

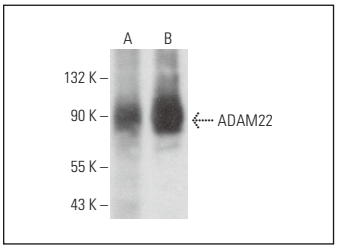
Molecular Weight of ADAM22: 100 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

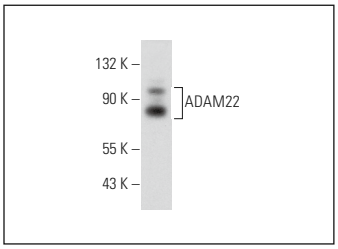
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ADAM22 (F-3): sc-515300. Western blot analysis of ADAM22 expression in mouse brain (**A**) and rat brain (**B**) tissue extracts.



ADAM22 (F-3): sc-515300. Western blot analysis of ADAM22 expression in SH-SY5Y whole cell lysate.

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.