SANTA CRUZ BIOTECHNOLOGY, INC.

ADAM22 (C-2): sc-373931

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 2q33.3, 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. Sagane, K., et al. 1999. Cloning and chromosomal mapping of mouse ADAM11, ADAM22 and ADAM23. Gene 236: 79-86.

CHROMOSOMAL LOCATION

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

SOURCE

ADAM22 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 286-319 within an internal region of ADAM22 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ADAM22 (C-2) is available conjugated to agarose (sc-373931 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-373931 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373931 PE), fluorescein (sc-373931 FITC), Alexa Fluor® 488 (sc-373931 AF488), Alexa Fluor® 546 (sc-373931 AF546), Alexa Fluor® 594 (sc-373931 AF594) or Alexa Fluor® 647 (sc-373931 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373931 AF680) or Alexa Fluor® 790 (sc-373931 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373931 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

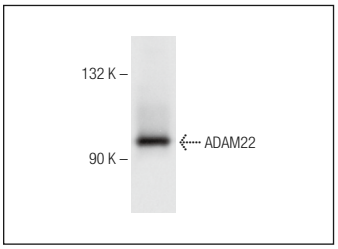
ADAM22 (C-2) is recommended for detection of ADAM22 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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.

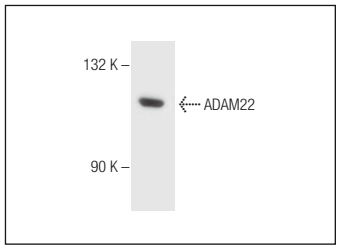
Molecular Weight of ADAM22: 100 kDa.

Positive Controls: rat cerebellum extract: sc-2398 or human liver extract: sc-363766.

DATA



ADAM22 (C-2): sc-373931. Western blot analysis of ADAM22 expression in rat cerebellum tissue extract.



ADAM22 (C-2): sc-373931. Western blot analysis of ADAM22 expression in human liver tissue extract.

SELECT PRODUCT CITATIONS

1. Lee, S.H., et al. 2019. LGI3 is secreted and binds to ADAM22 via TRIF-dependent NFκB pathway in response to LPS in human keratinocytes. Cytokine 126: 154872.
2. Charmsaz, S., et al. 2020. ADAM22/LGI1 complex as a new actionable target for breast cancer brain metastasis. BMC Med. 18: 349.
3. Sallum, M.A.M., et al. 2020. Identification keys to the *Anopheles* mosquitoes of South America (Diptera: Culicidae). II. Fourth-instar larvae. Parasit. Vectors 13: 582.
4. Ferreira da Silva, T., et al. 2021. Plasmalogens regulate the Akt-ULK1 signaling pathway to control the position of the axon initial segment. Prog. Neurobiol. 205: 102123.

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.