

ADAMTS-2 (18Q): sc-100479

BACKGROUND

ADAMTS (a disintegrin and metalloproteinase domain with Thrombospondin type-1 modules) is a family of zinc-dependent proteases that are implicated in a variety of normal and pathological conditions, including arthritis and cancer. ADAMTS protein family members contain an N-terminal propeptide domain, a metalloproteinase domain, a disintegrin-like domain and a C-terminus that contains a varying number of Thrombospondin type-1 (TSP-1) motifs. ADAMTS genes are primarily expressed in fetal tissues, including the lung, kidney and liver. ADAMTS-2 cleaves the propeptides of Collagen type I and II, but not Collagen type III, prior to fibril assembly. It may also play a role in development aside from collagen biosynthesis. ADAMTS-2 is secreted and associated with the extracellular matrix, with the highest levels in skin, bone, tendon and aorta. Defects in ADAMTS2 are the cause of Ehlers-Danlos syndrome type VIIC (EDS VIIC), a recessively inherited connective-tissue disorder characterized clinically by severe skin fragility and joint hypermobility.

REFERENCES

1. Tang, B.L. and Hong, W. 1999. ADAMTS: a novel family of proteases with an ADAM protease domain and Thrombospondin 1 repeats. *FEBS Lett.* 445: 223-225.
2. Tang, B.L. 2001. ADAMTS: a novel family of extracellular matrix proteases. *Int. J. Biochem. Cell Biol.* 33: 33-44.
3. Li, S.W., Arita, M., Fertala, A., Bao, Y., Kopen, G.C., Langsjö, T.K., Hyttinen, M.M., Helminen, H.J. and Prockop, D.J. 2001. Transgenic mice with inactive alleles for procollagen N-proteinase (ADAMTS-2) develop fragile skin and male sterility. *Biochem. J.* 355: 271-278.
4. Cal, S., Obaya, A.J., Llamazares, M., Garabaya, C., Quesada, V. and Lopez-Otin, C. 2002. Cloning, expression analysis, and structural characterization of seven novel human ADAMTSs, a family of metalloproteinases with disintegrin and Thrombospondin 1 domains. *Gene* 283: 49-62.
5. Wang, W.M., Lee, S., Steiglit, B.M., Scott, I.C., Lebares, C.C., Allen, M.L., Brenner, M.C., Takahara, K. and Greenspan, D.S. 2003. Transforming growth factor β induces secretion of activated ADAMTS-2. A procollagen III N-proteinase. *J. Biol. Chem.* 278: 19549-19557.
6. Colige, A., Nuytinck, L., Hausser, I., van Essen, A.J., Thiry, M., Herens, C., Adès, L.C., Malfait, F., Paepe, A.D., Franck, P., Wolff, G., Oosterwijk, J.C., Smitt, J.H., Lapière, C.M. and Nusgens, B.V. 2004. Novel types of mutation responsible for the dermatosparactic type of Ehlers-Danlos syndrome (Type VIIC) and common polymorphisms in the ADAMTS-2 gene. *J. Invest. Dermatol.* 123: 656-663.
7. SWISS-PROT/TrEMBL (Q8C9W3). World Wide Web URL: <http://www.uniprot.org/uniprot/Q8C9W3>

CHROMOSOMAL LOCATION

Genetic locus: ADAMTS2 (human) mapping to 5q35.3; Adamts2 (mouse) mapping to 11 B1.3.

SOURCE

ADAMTS-2 (18Q) is a mouse monoclonal antibody raised against recombinant ADAMTS-2 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ADAMTS-2 (18Q) is recommended for detection of ADAMTS-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ADAMTS-2 siRNA (h): sc-91785, ADAMTS-2 siRNA (m): sc-140864, ADAMTS-2 shRNA Plasmid (h): sc-91785-SH, ADAMTS-2 shRNA Plasmid (m): sc-140864-SH, ADAMTS-2 shRNA (h) Lentiviral Particles: sc-91785-V and ADAMTS-2 shRNA (m) Lentiviral Particles: sc-140864-V.

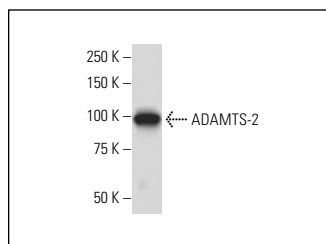
Molecular Weight of ADAMTS-2: 135 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).

DATA



ADAMTS-2 (18Q): sc-100479. Western blot analysis of ADAMTS-2 expression in PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kirana, C., Peng, L., Miller, R., Keating, J.P., Glenn, C., Shi, H., Jordan, T.W., Maddern, G.J. and Stubbs, R.S. 2019. Combination of laser microdissection, 2D-DIGE and MALDI-TOF MS to identify protein biomarkers to predict colorectal cancer spread. *Clin. Proteomics* 16: 3.

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.