SANTA CRUZ BIOTECHNOLOGY, INC.

ADAM9 (15): sc-135822

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The human ADAM9 gene maps to chromosome 8p11.22 and encodes an 819 amino acid glycoprotein that is present in brain, liver, heart, kidney, lung, and trachea. ADAM (a disintegrin and metalloprotease) glycoproteins are a family of over 30 membrane-anchored, Zn^{2+}-dependent proteases that influence fertilization, muscle fusion, cytokine secretion, modulation of Notch-related neurogenic pathways, monocyte fusion, and many other cell adhesion-dependent events. ADAM proteins contain 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 (TM) domain (alternative splicing before the TM domain in ADAM11, 12, 17, and 28 can yield soluble forms), and a cytoplasmic tail. Removal of the amino-terminal signal peptide initiates secretion from the cell, or anchoring on the cell surface. Furin or furin-like proprotein convertase-dependent cleavage of the pro domain initiates catalytic activity of the metalloprotease.

REFERENCES

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2. Gilpin, B.J., Loechel, F., Mattei, M.G., Engvall, E., Albrechtsen, R. and Wewer, U.M. 1998. A novel, secreted form of human ADAM12 (meltrin α) provokes myogenesis *in vivo*. J. Biol. Chem. 273: 157-166.
3. Roberts, C.M., Tani, P.H., Bridges, L.C., Laszik, Z. and Bowditch, R.D. 1999. MDC-L, a novel metalloprotease disintegrin cysteine-rich protein family member expressed by human lymphocytes. J. Biol. Chem. 274: 29251-29259.
4. Stone, A.L., Kroeger, M. and Sang, Q.X. 1999. Structure-function analysis of the ADAM family of disintegrin-like and metalloproteinase-containing proteins. J. Protein Chem. 18: 447-465.
5. Primakoff, P. and Myles, D.G. 2000. The ADAM gene family: surface proteins with adhesion and protease activity. Trends Genet. 16: 83-87.
6. Namba, K., Nishio, M., Mori, K., Miyamoto, N., Tsurudome, M., Ito, M., Kawano, M., Uchida, A. and Ito, Y. 2001. Involvement of ADAM9 in multinucleated giant cell formation of blood monocytes. Cell. Immunol. 213: 104-113.
7. Hotoda, N., Koike, H., Sasagawa, N. and Ishiura, S. 2002. A secreted form of human ADAM9 has an α-secretase activity for APP. Biochem. Biophys. Res. Commun. 293: 800-805.
8. LocusLink Report (LocusID: 8754). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: ADAM9 (human) mapping to 8p11.22; Adam9 (mouse) mapping to 8 A2.

SOURCE

ADAM9 (15) is a mouse monoclonal antibody raised against amino acids 86-227 of ADAM9 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 500 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

APPLICATIONS

ADAM9 (15) is recommended for detection of ADAM9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

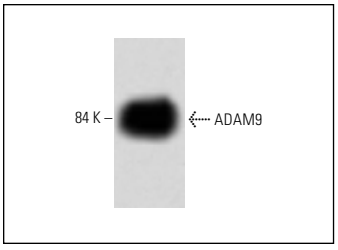
Suitable for use as control antibody for ADAM9 siRNA (h): sc-41408, ADAM9 siRNA (m): sc-41409, ADAM9 shRNA Plasmid (h): sc-41408-SH, ADAM9 shRNA Plasmid (m): sc-41409-SH, ADAM9 shRNA (h) Lentiviral Particles: sc-41408-V and ADAM9 shRNA (m) Lentiviral Particles: sc-41409-V.

Molecular Weight (predicted) of ADAM9 isoform 1/2: 91/72 kDa.

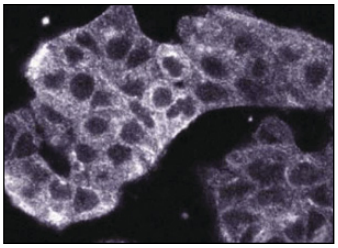
Molecular Weight (observed) of mature/pro ADAM9: 84/105 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caki-1 cell lysate: sc-2224 or human endothelial whole cell lysate.

DATA



ADAM9 (15): sc-135822. Western blot analysis of ADAM9 expression in human endothelial whole cell lysate.



ADAM9 (15): sc-135822. Immunofluorescence staining of A-431 cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Wang, J.J., Zou, J.X., Wang, H., Duan, Z.J., Wang, H.B., Chen, P., Liu, P.Q., Xu, J.Z. and Chen, H.W. 2019. Histone methyltransferase NSD2 mediates the survival and invasion of triple-negative breast cancer cells via stimulating ADAM9-EGFR-Akt signaling. Acta Pharmacol. Sin. 40: 1067-1075.

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. Not for resale.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.