

# ADAM10 (A-20): sc-16524

## BACKGROUND

ADAM (a disintegrin and metalloprotease) proteins are a family of over 30 membrane-anchored, glycosylated, Zn<sup>2+</sup> dependent proteases that are involved in cell-cell, cell-matrix interface related processes including fertilization, muscle fusion, secretion of TNF (tumor necrosis factor- $\alpha$ ), and modulation of the neurogenic function of Notch and Delta. 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 brain, testis, epididymis, ovary, breast, placenta, liver, heart, lung, bone, and muscle, and catalyze proteolysis, adhesion, fusion, and intracellular signaling. ADAM 10 is a TNF-processing enzyme that cleaves pro-TNF, a membrane-bound precursor protein, at Ala76-Val77, which causes membrane shedding of soluble TNF.

## 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. Rosendahl, M.S., et al. 1997. Identification and characterization of a pro-tumor necrosis factor- $\alpha$ -processing enzyme from the ADAM family of zinc metalloproteases. *J. Biol. Chem.* 272: 24588-24593.
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. Primakoff, P. and Myles, D.G. 2000. The ADAM gene family: surface proteins with adhesion and protease activity. *Trends Genet.* 16: 83-87.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 602192. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: ADAM10 (human) mapping to 15q21.3; Adam10 (mouse) mapping to 9 D.

## SOURCE

ADAM10 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ADAM10 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16524 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

ADAM10 (A-20) is recommended for detection of ADAM10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ADAM10 (A-20) is also recommended for detection of ADAM10 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ADAM10 siRNA (h): sc-41410, ADAM10 siRNA (m): sc-41411, ADAM10 shRNA Plasmid (h): sc-41410-SH, ADAM10 shRNA Plasmid (m): sc-41411-SH, ADAM10 shRNA (h) Lentiviral Particles: sc-41410-V and ADAM10 shRNA (m) Lentiviral Particles: sc-41411-V.

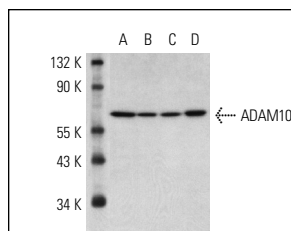
Molecular Weight of ADAM10 precursor: 100 kDa.

Molecular Weight of processed ADAM10: 80 kDa.

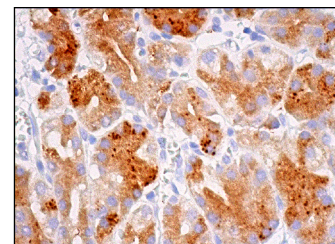
Molecular Weight of active ADAM10: 60 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, NIH/3T3 whole cell lysate: sc-2210 or U-937 cell lysate: sc-2239.

## DATA



ADAM10 (A-20): sc-16524. Western blot analysis of ADAM10 expression in MH-S (A), 3T3-L1 (B), NIH/3T3 (C) and U-937 (D) whole cell lysates.



ADAM10 (A-20): sc-16524. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ADAM10 (B-3): sc-28358** or **ADAM10 (A-3): sc-48400**, our highly recommended monoclonal alternatives to ADAM10 (A-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **ADAM10 (B-3): sc-28358**.