



# ADAM10 (AD214Y): sc-73684

## 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 $\alpha$  (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. ADAM10 is a TNF-processing enzyme that cleaves pro-TNF, a membrane-bound precursor protein, at Ala 76-Val 77, which causes membrane shedding of soluble TNF.

## REFERENCES

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2. Rosendahl, M.S., Ko, S.C., Long, D.L., Brewer, M.T., Rosenzweig, B., Hedl, E., Anderson, L., Pyle, S. M., Moreland, J., Meyers, M.A., Kohno, T., Lyons, D. and Lichenstein, H.S. 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., 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.
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™. 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 15q22; Adam10 (mouse) mapping to 9 D.

## SOURCE

ADAM10 (AD214Y) is a mouse monoclonal antibody raised against the extracellular domain of ADAM10 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

## PROTOCOLS

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

## APPLICATIONS

ADAM10 (AD214Y) is recommended for detection of ADAM10 of 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)] and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for ADAM10 siRNA (h): sc-41410.

Molecular Weight of ADAM10 precursor: 100 kDa.

Molecular Weight of active ADAM10: 60 kDa.

Molecular Weight of processed ADAM10: 80 kDa.

Positive Controls: U-937 cell lysate: sc-2239 or HuT 78 whole cell lysate: sc-2208.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## RESEARCH USE

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