

# ADAM10 (B-3): sc-28358



The Power to Question

## BACKGROUND

ADAM (a disintegrin and metalloprotease) proteins are a family of over 30 membrane-anchored, glycosylated,  $Zn^{2+}$  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.

## CHROMOSOMAL LOCATION

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

## SOURCE

ADAM10 (B-3) is a mouse monoclonal antibody raised against amino acids 1-300 of ADAM10 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ADAM10 (B-3) is available conjugated to agarose (sc-28358 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28358 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28358 PE), fluorescein (sc-28358 FITC), Alexa Fluor<sup>®</sup> 488 (sc-28358 AF488), Alexa Fluor<sup>®</sup> 546 (sc-28358 AF546), Alexa Fluor<sup>®</sup> 594 (sc-28358 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-28358 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-28358 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-28358 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

ADAM10 (B-3) is recommended for detection of ADAM10 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ADAM10 siRNA (h): sc-41410, ADAM10 siRNA (m): sc-41411, ADAM10 siRNA (r): sc-270165, ADAM10 shRNA Plasmid (h): sc-41410-SH, ADAM10 shRNA Plasmid (m): sc-41411-SH, ADAM10 shRNA Plasmid (r): sc-270165-SH, ADAM10 shRNA (h) Lentiviral Particles: sc-41410-V, ADAM10 shRNA (m) Lentiviral Particles: sc-41411-V and ADAM10 shRNA (r) Lentiviral Particles: sc-270165-V.

Molecular Weight of ADAM10 precursor: 100 kDa.

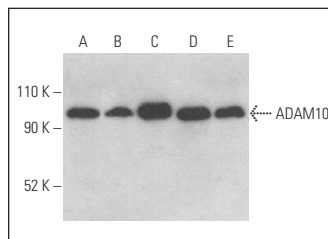
Molecular Weight of processed ADAM10: 80 kDa.

Molecular Weight of active ADAM10: 60 kDa.

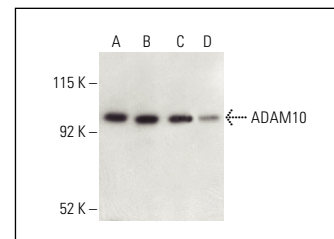
## STORAGE

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

## DATA



ADAM10 (B-3) HRP: sc-28358 HRP. Direct western blot analysis of ADAM10 expression in U-937 (A), KNRK (B), PC-12 (C), Jurkat (D) and HuT 78 (E) whole cell lysates.



ADAM10 (B-3): sc-28358. Western blot analysis of ADAM10 expression in Jurkat (A), U-937 (B), HuT 78 (C) and PC-12 (D) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

## SELECT PRODUCT CITATIONS

- Schirrmester, W., et al. 2009. Ectodomain shedding of E-cadherin and c-Met is induced by *Helicobacter pylori* infection. *Exp. Cell Res.* 315: 3500-3508.
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- Pappa, K.I., et al. 2017. High resolution proteomic analysis of the cervical cancer cell lines secretome documents deregulation of multiple proteases. *Cancer Genomics Proteomics* 14: 507-521.
- Cao, K., et al. 2019. Exposure to fluoride aggravates the impairment in learning and memory and neuropathological lesions in mice carrying the APP/PS1 double-transgenic mutation. *Alzheimers Res. Ther.* 11: 35.
- Mousa, Y.M., et al. 2020. Amylin and pramlintide modulate  $\gamma$ -secretase level and APP processing in lipid rafts. *Sci. Rep.* 10: 3751.
- Aboyoussef, A.M., et al. 2021. Enoxaparin prevents CXCL16/ADAM10-mediated cisplatin renal toxicity: role of the coagulation system and the transcriptional factor NF $\kappa$ B. *Life Sci.* 270: 119120.
- Gao, P., et al. 2022. Daphnetin ameliorates A $\beta$  pathogenesis via STAT3/GFAP signaling in an APP/PS1 double-transgenic mouse model of Alzheimer's disease. *Pharmacol. Res.* 180: 106227.

## RESEARCH USE

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

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