SANTA CRUZ BIOTECHNOLOGY, INC.

ADAM10 (B-3): sc-28358

SANTA CRUZ BIOTECHNOLOGY

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 TNFα (tumor necrosis factor α), 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 precusor 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 µg IgG_{2a} 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 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-28358 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28358 PE), fluorescein (sc-28358 FITC), Alexa Fluor® 488 (sc-28358 AF488), Alexa Fluor® 546 (sc-28358 AF546), Alexa Fluor® 594 (sc-28358 AF594) or Alexa Fluor® 647 (sc-28358 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28358 AF680) or Alexa Fluor® 790 (sc-28358 AF790), 200 µg/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 µg per 100-500 µg 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.

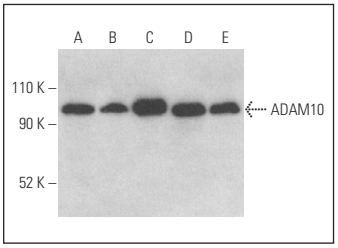
Molecular Weight of processed ADAM10: 80 kDa.

Molecular Weight of active ADAM10: 60 kDa.

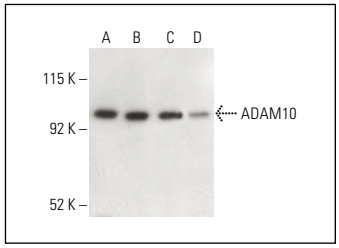
STORAGE

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

1. Schirrmeister, W., et al. 2009. Ectodomain shedding of E-cadherin and c-Met is induced by *Helicobacter pylori* infection. Exp. Cell Res. 315: 3500-3508.
2. Qi, X.L., et al. 2013. Preventing expression of the nicotinic receptor subunit α7 in SH-SY5Y cells with interference RNA indicates that this receptor may protect against the neurotoxicity of Aβ. Neurochem. Res. 38: 943-950.
3. Gontier, G., et al. 2015. Blocking IGF signaling in adult neurons alleviates Alzheimer's disease pathology through amyloid-β clearance. J. Neurosci. 35: 11500-11513.
4. 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.
5. 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.
6. Mousa, Y.M., et al. 2020. Amylin and pramlintide modulate γ-secretase level and APP processing in lipid rafts. Sci. Rep. 10: 3751.
7. Aboyoussef, A.M., et al. 2021. Enoxaparin prevents CXCL16/ADAM10-mediated cisplatin renal toxicity: role of the coagulation system and the transcriptional factor NFκB. Life Sci. 270: 119120.
8. Gao, P., et al. 2022. Daphnetin ameliorates Aβ 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.