

ADAM15 (D-5): sc-365752

BACKGROUND

ADAM (a disintegrin and metalloprotease) proteins are a family of over 30 membrane-anchored, glycosylated, Zn²⁺-dependent proteases that are involved in cell-cell, cell-matrix interface-related processes including fertilization, muscle fusion, secretion of TNF α (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. ADAM 15 (metargidin) is an 814 amino acid plasma membrane protein that contains an RGD tripeptide sequence through which it binds to integrins $\alpha_v\beta_3$ and $\alpha_5\beta_1$.

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. Kratzschmar, J., et al. 1996. Metargidin, a membrane-anchored metalloprotease-disintegrin protein with an RGD integrin binding sequence. *J. Biol. Chem.* 271: 4593-4596.
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. Nath, D., et al. 1999. Interaction of metargidin (ADAM-15) with $\alpha_v\beta_3$ and $\alpha_5\beta_1$ integrins on different haemopoietic cells. *J. Cell Sci.* 112: 579-587.

CHROMOSOMAL LOCATION

Genetic locus: ADAM15 (human) mapping to 1q22; Adam15 (mouse) mapping to 3 F1.

SOURCE

ADAM15 (D-5) is a mouse monoclonal antibody raised against amino acids 561-620 of ADAM15 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ADAM15 (D-5) is available conjugated to agarose (sc-365752 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365752 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365752 PE), fluorescein (sc-365752 FITC), Alexa Fluor[®] 488 (sc-365752 AF488), Alexa Fluor[®] 546 (sc-365752 AF546), Alexa Fluor[®] 594 (sc-365752 AF594) or Alexa Fluor[®] 647 (sc-365752 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365752 AF680) or Alexa Fluor[®] 790 (sc-365752 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, ADAM15 (D-5) is available conjugated to biotin (sc-365752 B), 200 μ g/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

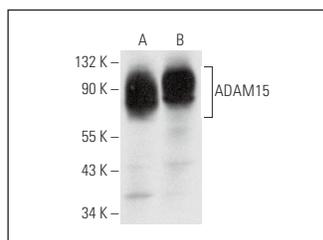
ADAM15 (D-5) is recommended for detection of ADAM15 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 ADAM15 siRNA (h): sc-37057, ADAM15 siRNA (m): sc-41416, ADAM15 shRNA Plasmid (h): sc-37057-SH, ADAM15 shRNA Plasmid (m): sc-41416-SH, ADAM15 shRNA (h) Lentiviral Particles: sc-37057-V and ADAM15 shRNA (m) Lentiviral Particles: sc-41416-V.

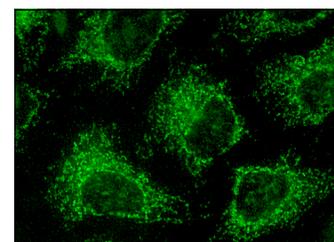
Molecular Weight of ADAM15: 110 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, HeLa whole cell lysate: sc-2200 or HCT 116 whole cell lysate: sc-364175.

DATA



ADAM15 (D-5): sc-365752. Western blot analysis of ADAM15 expression in HUV-EC-C (A) and HeLa (B) whole cell lysates.



ADAM15 (D-5): sc-365752. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Duan, X., et al. 2013. ADAM15 is involved in MICB shedding and mediates the effects of gemcitabine on MICB shedding in PANC-1 pancreatic cancer cells. *Mol. Med. Rep.* 7: 991-997.
2. Lin, Q., et al. 2021. Multi-organ metastasis as destination for breast cancer cells guided by biomechanical architecture. *Am. J. Cancer Res.* 11: 2537-2567.
3. Xu, J.H., et al. 2021. ADAM15 correlates with prognosis, immune infiltration and apoptosis in hepatocellular carcinoma. *Aging* 13: 20395-20417.
4. Zhou, J., et al. 2022. Integrin α_3/α_6 and α_v are implicated in ADAM15-activated FAK and EGFR signalling pathway individually and promote non-small-cell lung cancer progression. *Cell Death Dis.* 13: 486.

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.

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