

Adipsin (D10/4): sc-47683

BACKGROUND

Adipsin is the mouse homolog of the previously described human complement Factor D, a serine protease, which is now designated human Adipsin. Human Adipsin is highly expressed in and secreted by adipose tissue, and it has also been found in monocytes and macrophages. Rodent Adipsin has only been detected in high levels in adipose tissue. It has been shown that complement factor B, when complexed with activated complement component C3, is cleaved by Adipsin. While low expression of Adipsin has been confirmed in obese mice with hypothalamic defects, this inverse correlation between Adipsin expression and obesity has not been demonstrated in humans.

REFERENCES

1. Lesavre, P.H., et al. 1979. The alternative pathway C3/C5 convertase: chemical basis of factor B activation. *J. Immunol.* 123: 529-534.
2. Niemann, M.A., et al. 1984. Amino acid sequence of human D of the alternative complement pathway. *Biochemistry* 23: 2482-2486.

CHROMOSOMAL LOCATION

Genetic locus: CFD (human) mapping to 19p13.3.

SOURCE

Adipsin (D10/4) is a mouse monoclonal antibody raised against complement protein factor D purified from human serum.

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.

Adipsin (D10/4) is available conjugated to agarose (sc-47683 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-47683 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47683 PE), fluorescein (sc-47683 FITC), Alexa Fluor® 488 (sc-47683 AF488), Alexa Fluor® 546 (sc-47683 AF546), Alexa Fluor® 594 (sc-47683 AF594) or Alexa Fluor® 647 (sc-47683 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-47683 AF680) or Alexa Fluor® 790 (sc-47683 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Adipsin (D10/4) is recommended for detection of Adipsin of human origin by Western Blotting (starting dilution 1:200, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Adipsin siRNA (h): sc-29646, Adipsin shRNA Plasmid (h): sc-29646-SH and Adipsin shRNA (h) Lentiviral Particles: sc-29646-V.

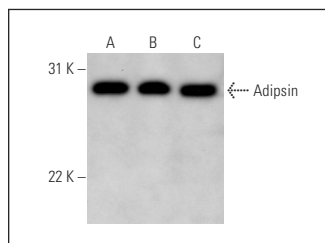
Molecular Weight of Adipsin: 28 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, THP-1 cell lysate: sc-2238 or U-937 cell lysate: sc-2239.

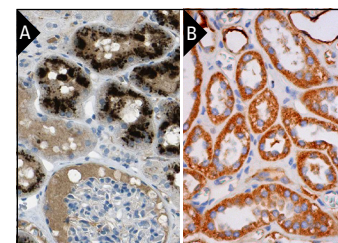
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Adipsin (D10/4): sc-47683 Western blot analysis of Adipsin expression in THP-1 (A), AML-193 (B) and U-937 (C) whole cell lysates.



Adipsin (D10/4): sc-47683. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and extracellular staining of cells in tubuli. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

SELECT PRODUCT CITATIONS

1. Liu, L., et al. 2019. CITED2 mediates the mechanical loading-induced suppression of adipokines in the infrapatellar fat pad. *Ann. N.Y. Acad. Sci.* 1442: 153-164.
2. Cheng, X., et al. 2021. IL-1/IL-1R signaling induced by all-*trans*-retinal contributes to complement alternative pathway activation in retinal pigment epithelium. *J. Cell. Physiol.* 236: 3660-3674.
3. Pratelli, G., et al. 2022. Bio-waste products of *Mangifera indica* L. reduce adipogenesis and exert antioxidant effects on 3T3-L1 cells. *Antioxidants* 11: 363.
4. Shi, Z., et al. 2022. Exercise promotes bone marrow microenvironment by inhibiting adipsin in diet-induced male obese mice. *Nutrients* 15: 19.

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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