SANTA CRUZ BIOTECHNOLOGY, INC.

MCFD2 (F-3): sc-390463

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Multiple coagulation factor deficiency protein 2 (MCFD2) is localized in the endoplasmic reticulum-Golgi intermediate compartment (ERGIC) through a direct, calcium-dependent interaction with LMAN1. The MCFD2-LMAN1 complex forms a specific cargo receptor for the transport of selected proteins from the endoplasmic reticulum to the Golgi apparatus. Mutations in the MCFD2 gene may cause of factor V and factor VIII combined deficiency (F5F8D). F5F8D is an autosomal recessive human bleeding disorder characterized by the reduction of both clotting proteins.

REFERENCES

1. Zhang, B., et al. 2003. Bleeding due to disruption of a cargo-specific ER-to-Golgi transport complex. Nat. Genet. 34: 220-225.
2. Spatuzza, C., et al. 2004. Heat shock induces preferential translation of ERGIC-53 and affects its recycling pathway. J. Biol. Chem. 279: 42535-42544.
3. Zhang, B., et al. 2004. Familial multiple coagulation factor deficiencies: new biologic insight from rare genetic bleeding disorders. J. Thromb. Haemost. 2: 1564-1572.
4. Zhang, B., et al. 2005. Combined deficiency of factor V and factor VIII is due to mutations in either LMAN1 or MCFD2. Blood 107: 1903-1907.
5. Zhang, B., et al. 2005. LMAN1 and MCFD2 form a cargo receptor complex and interact with coagulation factor VIII in the early secretory pathway. J. Biol. Chem. 280: 25881-25886.

CHROMOSOMAL LOCATION

Genetic locus: MCFD2 (human) mapping to 2p21; Mcfd2 (mouse) mapping to 17 E4.

SOURCE

MCFD2 (F-3) is a mouse monoclonal antibody raised against amino acids 1-146 representing full length MCFD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MCFD2 (F-3) is available conjugated to agarose (sc-390463 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390463 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390463 PE), fluorescein (sc-390463 FITC), Alexa Fluor® 488 (sc-390463 AF488), Alexa Fluor® 546 (sc-390463 AF546), Alexa Fluor® 594 (sc-390463 AF594) or Alexa Fluor® 647 (sc-390463 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390463 AF680) or Alexa Fluor® 790 (sc-390463 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

MCFD2 (F-3) is recommended for detection of MCFD2 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), immunohistochemistry (including paraffin-embedded sections) (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 MCFD2 siRNA (h): sc-44445, MCFD2 siRNA (m): sc-44446, MCFD2 shRNA Plasmid (h): sc-44445-SH, MCFD2 shRNA Plasmid (m): sc-44446-SH, MCFD2 shRNA (h) Lentiviral Particles: sc-44445-V and MCFD2 shRNA (m) Lentiviral Particles: sc-44446-V.

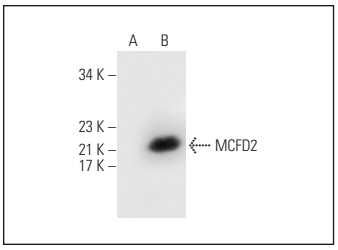
Molecular Weight of MCFD2: 17 kDa.

Positive Controls: MCFD2 (m): 293T Lysate: sc-121557.

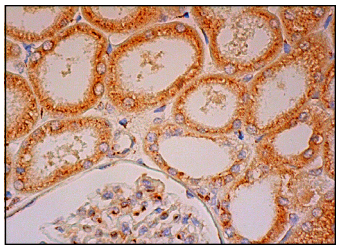
RECOMMENDED SUPPORT REAGENTS

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



MCFD2 (F-3): sc-390463. Western blot analysis of MCFD2 expression in non-transfected: sc-117752 (**A**) and mouse MCFD2 transfected: sc-121557 (**B**) 293T whole cell lysates.



MCFD2 (F-3): sc-390463. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and cells in tubules.

SELECT PRODUCT CITATIONS

1. Fukamachi, M., et al. 2018. Multiple coagulation factor deficiency protein 2 as a crucial component in metastasis of human oral cancer. Exp. Cell Res. 368: 119-125.

RESEARCH USE

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