

FTCD (58K-9): sc-53128

BACKGROUND

58K protein antibodies are excellent for use as markers for the Golgi complex. The 58K protein has been identified as being FTCD, a bifunctional enzyme that channels 1-carbon units from formiminoglutamate, a metabolite of the histidine degradation pathway, to the folate pool. Defects in FTCD are the cause of glutamate formiminotransferase deficiency (also known as formiminoglutamicaciduria or FIGLU-uria), an autosomal recessive disorder. Features of a severe phenotype include elevated levels of formiminoglutamate (FIGLU) in the urine in response to histidine administration, megaloblastic anemia and mental retardation. Features of a mild phenotype include high urinary excretion of FIGLU in the absence of histidine administration, mild developmental delay and no hematological abnormalities.

REFERENCES

- Hennig, D., et al. 1998. A formiminotransferase cyclodeaminase isoform is localized to the Golgi complex and can mediate interaction of *trans*-Golgi network-derived vesicles with microtubules. *J. Biol. Chem.* 273: 19602-19611.
- Bashour, A.M., et al. 1998. 58K, a microtubule-binding Golgi protein, is a formiminotransferase cyclodeaminase. *J. Biol. Chem.* 273: 19612-19617.

CHROMOSOMAL LOCATION

Genetic locus: FTCD (human) mapping to 21q22.3; *Ftcd* (mouse) mapping to 10 C1.

SOURCE

FTCD (58K-9) is a mouse monoclonal antibody raised against full length native FTCD of rat origin.

PRODUCT

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

APPLICATIONS

FTCD (58K-9) is recommended for detection of FTCD of mouse, rat, human and canine 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), 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 FTCD siRNA (h): sc-60662, FTCD siRNA (m): sc-60663, FTCD shRNA Plasmid (h): sc-60662-SH, FTCD shRNA Plasmid (m): sc-60663-SH, FTCD shRNA (h) Lentiviral Particles: sc-60662-V and FTCD shRNA (m) Lentiviral Particles: sc-60663-V.

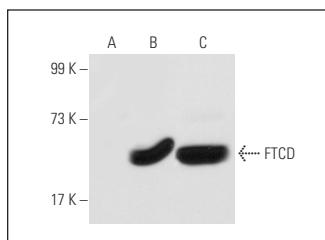
Molecular Weight of FTCD: 58 kDa.

Positive Controls: rat liver extract: sc-2395 or FTCD (m2): 293T Lysate: sc-120329.

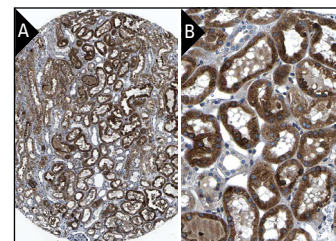
RECOMMENDED SUPPORT REAGENTS

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



FTCD (58K-9): sc-53128. Western blot analysis of FTCD expression in non-transfected: sc-117752 (A) and mouse FTCD transfected: sc-120329 (B) 293T whole cell lysates and rat liver tissue extract (C).



FTCD (58K-9): sc-53128. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Perdomo, A.B., et al. 2012. Liver protein profiling in chronic hepatitis C: identification of potential predictive markers for interferon therapy outcome. *J. Proteome Res.* 11: 717-727.
- Zhang, X., et al. 2020. Proteomic analysis of liver proteins of mice exposed to 1,2-dichloropropane. *Arch. Toxicol.* 94: 2691-2705.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.