SANTA CRUZ BIOTECHNOLOGY, INC.

FAM49B (D-8): sc-390478

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FAM49B (family with sequence similarity 49, member B), also known as L1 or BM-009, is a 324 amino acid protein belonging to the FAM49 family. Existing as two alternatively spliced isoforms, FAM49B may be associated with endometriosis-related changes and endocrine disrupting chemicals. FAM49B is encoded by a gene located on human chromosome 8q24.21. Human chromosome 8 makes up of nearly 146 million bases and encodes about 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and typically associated with a poor prognosis. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder. Trisomy 8, also known as Warkany syndrome 2, most often results in early miscarriage but is occasionally seen in a mosaic form in surviving patients who suffer to a varying degree from a number of symptoms including retarded mental and motor development, and certain facial and developmental defects. WRN is a DNA helicase encoded by chromosome 8 and shown defective in those with the early aging disorder Werner syndrome.

CHROMOSOMAL LOCATION

Genetic locus: FAM49B (human) mapping to 8q24.21; Fam49b (mouse) mapping to 15 D1.

SOURCE

FAM49B (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 8-20 near the N-terminus of FAM49B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FAM49B (D-8) is available conjugated to agarose (sc-390478 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390478 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390478 PE), fluorescein (sc-390478 FITC), Alexa Fluor® 488 (sc-390478 AF488), Alexa Fluor® 546 (sc-390478 AF546), Alexa Fluor® 594 (sc-390478 AF594) or Alexa Fluor® 647 (sc-390478 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390478 AF680) or Alexa Fluor® 790 (sc-390478 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390478 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

FAM49B (D-8) is recommended for detection of FAM49B 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).

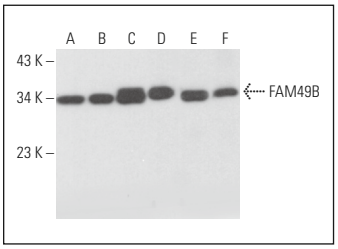
FAM49B (D-8) is also recommended for detection of FAM49B in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for FAM49B siRNA (h): sc-77674, FAM49B siRNA (m): sc-108126, FAM49B shRNA Plasmid (h): sc-77674-SH, FAM49B shRNA Plasmid (m): sc-108126-SH, FAM49B shRNA (h) Lentiviral Particles: sc-77674-V and FAM49B shRNA (m) Lentiviral Particles: sc-108126-V.

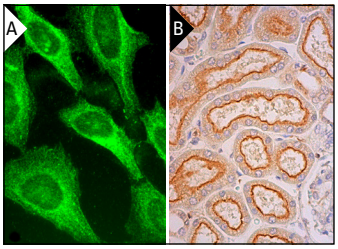
Molecular Weight of FAM49B: 37 kDa.

Positive Controls: JAR cell lysate: sc-2276, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

DATA



FAM49B (D-8): sc-390478. Western blot analysis of FAM49B expression in JAR (**A**), HeLa (**B**), K-562 (**C**) and HEL 92.1.7 (**D**) whole cell lysates and mouse postnatal brain (**E**) and rat placenta (**F**) tissue extracts.



FAM49B (D-8): sc-390478. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Shang, W., et al. 2018. Genome-wide CRISPR screen identifies FAM49B as a key regulator of Actin dynamics and T cell activation. Proc. Natl. Acad. Sci. USA 115: E4051-E4060.
2. Bon, C., et al. 2019. SINEUP non-coding RNAs rescue defective frataxin expression and activity in a cellular model of Friedreich's Ataxia. Nucleic Acids Res. 47: 10728-10743.
3. Liu, G., et al. 2023. Downregulation of CYRI-B promotes migration, invasion and EMT by activating the Rac1-STAT3 pathway in gastric cancer. Exp. Cell Res. 423: 113453.
4. Sisario, D., et al. 2024. Differential role of the RAC1-binding proteins FAM49b (CYRI-B) and CYFIP1 in platelets. Cells 13: 299.

RESEARCH USE

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