SANTA CRUZ BIOTECHNOLOGY, INC.

FAM117A (G-5): sc-393898

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes. Chromosome 17 is also linked to neurofibromatosis, a condition characterized by neural and epidermal lesions, and dysregulated Schwann cell growth. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are also associated with chromosome 17. The FAM117A gene product has been provisionally designated FAM117A pending further characterization.

REFERENCES

1. Welsch, M.J., et al. 2005. Birt-Hogg-Dube syndrome. Int. J. Dermatol. 44: 668-673.
2. Nusbaum, R., et al. 2006-2007. Susceptibility to breast cancer: hereditary syndromes and low penetrance genes. Breast Dis. 27: 21-50.
3. Al-Dirbashi, O.Y., et al. 2007. Quantification of N-acetylaspartic acid in urine by LC-MS/MS for the diagnosis of Canavan disease. J. Inherit. Metab. Dis. 30: 612.

CHROMOSOMAL LOCATION

Genetic locus: FAM117A (human) mapping to 17q21.33; Fam117a (mouse) mapping to 11 D.

SOURCE

FAM117A (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 417-446 near the C-terminus of FAM117A of mouse origin.

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.

FAM117A (G-5) is available conjugated to agarose (sc-393898 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393898 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393898 PE), fluorescein (sc-393898 FITC), Alexa Fluor® 488 (sc-393898 AF488), Alexa Fluor® 546 (sc-393898 AF546), Alexa Fluor® 594 (sc-393898 AF594) or Alexa Fluor® 647 (sc-393898 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393898 AF680) or Alexa Fluor® 790 (sc-393898 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393898 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

FAM117A (G-5) is recommended for detection of FAM117A of mouse, rat, human and hamster 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FAM117A siRNA (h): sc-93647, FAM117A siRNA (m): sc-145020, FAM117A shRNA Plasmid (h): sc-93647-SH, FAM117A shRNA Plasmid (m): sc-145020-SH, FAM117A shRNA (h) Lentiviral Particles: sc-93647-V and FAM117A shRNA (m) Lentiviral Particles: sc-145020-V.

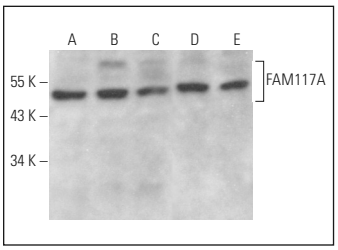
Molecular Weight of FAM117A: 48 kDa.

Positive Controls: human liver extract: sc-363766, CHO-K1 cell lysate: sc-3809 or NIH/3T3 whole cell lysate: sc-2210.

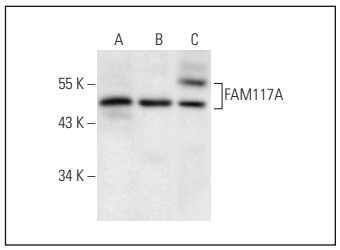
RECOMMENDED SUPPORT REAGENTS

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.

DATA



FAM117A (G-5): sc-393898. Western blot analysis of FAM117A expression in NIH/3T3 (**A**), TF-1 (**B**), HEL 92.1.7 (**C**), M1 (**D**) and PC-12 (**E**) whole cell lysates.



FAM117A (G-5): sc-393898. Western blot analysis of FAM117A expression in NIH/3T3 (**A**) and CHO-K1 (**B**) whole cell lysates and human liver tissue extract (**C**).

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.