

FAT2 (8C5): sc-59985

BACKGROUND

The cadherins represent a family of Ca²⁺-dependent adhesion molecules that function to mediate cell to cell binding that is critical for the maintenance of structure and morphogenesis. Cadherins each contain a large extracellular domain at the N-terminus, which is characterized by a series of five homologous repeats, the most distal of which is thought to be responsible for binding specificity. The relatively short C-terminal intracellular domain interacts with a variety of cytoplasmic proteins, including β -catenin, to regulate cadherin function. The cadherin superfamily includes cadherins, protocadherins, desmogleins and desmocollins. FAT2 (FAT tumor suppressor homolog 2), also known as CDHF8, HFAT2 or MEGF1 (multiple epidermal growth factor-like domains 1), is a single-pass type I membrane protein that belongs to the protocadherin subfamily of cadherins. FAT2 contains one Laminin G-like domain, 2 EGF-like domains and 32 cadherin domains and is believed to function as a cell adhesion molecule.

REFERENCES

1. Sano, K., et al. 1993. Protocadherins: a large family of cadherin-related molecules in central nervous system. *EMBO J.* 12: 2249-2256.
2. Wu, Q., et al. 1999. A striking organization of a large family of human neural cadherin-like cell adhesion genes. *Cell* 97: 779-790.
3. Suzuki, S.T. 2000. Recent progress in protocadherin research. *Exp. Cell Res.* 261: 13-18.
4. Hill, E., et al. 2001. Cadherin superfamily proteins in *Caenorhabditis elegans* and *Drosophila melanogaster*. *J. Mol. Biol.* 305: 1011-1024.
5. Wolverson, T., et al. 2001. Identification and characterization of three members of a novel subclass of protocadherins. *Genomics* 76: 66-72.
6. Noonan, J.P., et al. 2004. Gene conversion and the evolution of protocadherin gene cluster diversity. *Genome Res.* 14: 354-366.

CHROMOSOMAL LOCATION

Genetic locus: FAT2 (human) mapping to 5q33.1.

SOURCE

FAT2 (8C5) is a mouse monoclonal antibody raised against recombinant FAT2 fusion protein of human origin.

PRODUCT

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

FAT2 (8C5) is available conjugated to agarose (sc-59985 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59985 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59985 PE), fluorescein (sc-59985 FITC), Alexa Fluor® 488 (sc-59985 AF488), Alexa Fluor® 546 (sc-59985 AF546), Alexa Fluor® 594 (sc-59985 AF594) or Alexa Fluor® 647 (sc-59985 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-59985 AF680) or Alexa Fluor® 790 (sc-59985 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

FAT2 (8C5) is recommended for detection of FAT2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

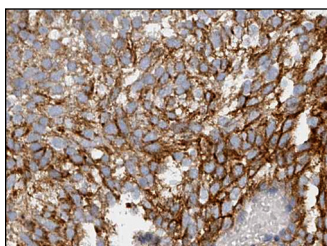
Suitable for use as control antibody for FAT2 siRNA (h): sc-91917, FAT2 shRNA Plasmid (h): sc-91917-SH and FAT2 shRNA (h) Lentiviral Particles: sc-91917-V.

Molecular Weight of FAT2: 480 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



FAT2 (8C5): sc-59985. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urothelial cancer tissue showing membrane staining of tumor cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Lodge, E.J., et al. 2020. Requirement of FAT and DCHS protocadherins during hypothalamic-pituitary development. *JCI Insight* 5: 134310.

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.