

FAT1 (FAT-1 3D7/1): sc-53283

BACKGROUND

The FAT proteins are members of the Cadherin superfamily homologous to the *Drosophila* Fat protein that functions as a positive regulator of planar cell polarity in the *Drosophila* wing. FAT1 is an unusual cadherin that controls cell growth and planar polarity while acting as a tumor suppressor. FAT1 is a proximal element of a signaling pathway that determines both cellular polarity in the plane of the monolayer and directed actin-dependent cell motility. FAT1 is localized at the leading edge of lamellipodia, filopodia and microspike tips where it directly interacts with Ena/VASP proteins to regulate the actin polymerization complex. When targeted to mitochondrial outer leaflets, the cytoplasmic domain of FAT1 recruits components of the actin polymerization machinery sufficient to induce ectopic actin polymerization. FAT1 expression in vascular smooth muscle cells (VSMCs) increases significantly after arterial injury or growth factor stimulation, implicating FAT1 in the control of VSMC functions central to vascular remodeling by facilitating migration and limiting proliferation. FAT1 is also involved in psychic disorders, and its action may be of patho-physiological importance.

REFERENCES

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SOURCE

FAT1 (FAT-1 3D7/1) is a mouse monoclonal antibody raised against the cytoplasmic domain of FAT1 of *Drosophila* origin.

PRODUCT

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

APPLICATIONS

FAT1 (FAT-1 3D7/1) is recommended for detection of FAT1 of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of FAT1: 500 kDa.

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) 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.

SELECT PRODUCT CITATIONS

- Hsu, T.N., Huang, C.M., Huang, C.S., Huang, M.S., Yeh, C.T., Chao, T.Y. and Bamodu, O.A. 2019. Targeting FAT1 inhibits carcinogenesis, induces oxidative stress and enhances cisplatin sensitivity through deregulation of LRP5/WNT2/GSS signaling axis in oral squamous cell carcinoma. *Cancers* 11 pii: E1883.

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.