SANTA CRUZ BIOTECHNOLOGY, INC.

FGD3 (T-18): sc-11116

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The Power to Question

BACKGROUND

FGD1 gene mutations result in faciogenital dysplasia (FGDY, Aarskog syndrome), an X-linked developmental disorder that adversely affects the formation of multiple skeletal structures. FGD1 maps to human chromosome Xp11.21 and shares a high degree of sequence identity with the 82 kDa FGD2 (6p21.2) and the 81 kDa FGD3 (9q22) proteins. FGD1 encodes a guanine nucleotide exchange factor that specifically activates the Rho GTPase Cdc42. FGD2 is present in several diverse tissues during embryogenesis, suggesting a role in embryonic development. FGD3 stimulates fibroblasts to form filopodia, which are actin microspikes formed upon the stimulation of Cdc42. All FGD family members contain equivalent signaling domains and a conserved structural organization, which strongly suggests that these signaling domains form a canonical core structure for members of the FGD family of RhoGEF proteins. These proteins control essential signals required during embryonic development.

REFERENCES

1. Pasteris, N.G., et al. 1994. Isolation and characterization of the faciogenital dysplasia (Aarskog-Scott syndrome) gene: a putative Rho/Rac guanine nucleotide exchange factor. Cell 79: 669-678.
2. Zheng, Y., et al. 1996. The faciogenital dysplasia gene product FGD1 functions as a Cdc42Hs-specific guanine-nucleotide exchange factor. J. Biol. Chem. 271: 33169-33172.
3. Olson, M.F., et al. 1996. Faciogenital dysplasia protein (FGD1) and Vav, two related proteins required for normal embryonic development, are upstream regulators of Rho GTPases. Curr. Biol. 6: 1628-1633.
4. Whitehead, I.P., et al. 1998. CDC42 and FGD1 cause distinct signaling and transforming activities. Mol. Cell Biol. 18: 4689-4697.
5. Pasteris, N.G. and Gorski, J.L. 1999. Isolation, characterization, and mapping of the mouse and human FGD2 genes, Faciogenital Dysplasia (FGD1; Aarskog syndrome) gene homologues. Genomics 60: 57-66.
6. Pasteris, N.G., et al. 2000. Isolation, characterization, and mapping of the mouse FGD3 gene, a new Faciogenital Dysplasia (FGD1; Aarskog Syndrome) gene homologue. Gene 242: 237-247.

SOURCE

FGD3 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of FGD3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11116 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

FGD3 (T-18) is recommended for detection of FGD3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 FGD3 siRNA (h): sc-41715, FGD3 siRNA (m): sc-41716, FGD3 shRNA Plasmid (h): sc-41715-SH, FGD3 shRNA Plasmid (m): sc-41716-SH, FGD3 shRNA (h) Lentiviral Particles: sc-41715-V and FGD3 shRNA (m) Lentiviral Particles: sc-41716-V.

Molecular Weight of FGD3: 81 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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