

## FGD2 (G-16): sc-11113

### 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 FGD2 (6p21.2) and the 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.

### CHROMOSOMAL LOCATION

Genetic locus: FGD2 (human) mapping to 6p21.2; Fgd2 (mouse) mapping to 17 A3.3.

### SOURCE

FGD2 (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of FGD2 of mouse origin.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

### 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-11113 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

FGD2 (G-16) is recommended for detection of FGD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 FGD2 siRNA (h): sc-41713, FGD2 siRNA (m): sc-41714, FGD2 shRNA Plasmid (h): sc-41713-SH, FGD2 shRNA Plasmid (m): sc-41714-SH, FGD2 shRNA (h) Lentiviral Particles: sc-41713-V and FGD2 shRNA (m) Lentiviral Particles: sc-41714-V.

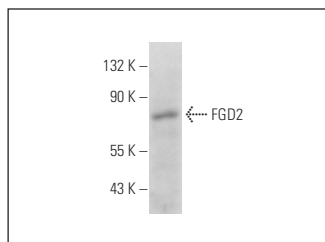
Molecular Weight of FGD2: 82 kDa.

Positive Controls: mouse spleen extract: sc-2391.

### 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

### DATA



FGD2 (G-16): sc-11113. Western blot analysis of FGD2 expression in mouse spleen tissue extract.

### RESEARCH USE

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