

FIG4 (H-300): sc-98633

BACKGROUND

FIG4, also known as SAC3, ALS11 or hSac3, is a 907 amino acid protein that contains one SAC domain through which it is thought to function as a phosphoinositide phosphatase that may play an important role in signal transduction and vesicle trafficking. Defects in the gene encoding FIG4 are the cause of Charcot-Marie-Tooth disease type 4J (CMT4J) and amyotrophic lateral sclerosis type 11 (ALS11), both of which negatively affect the nervous system. CMT4J is a recessive demyelinating disorder of the peripheral nervous system and is characterized by reduced motor nerve conduction velocities and axonal degeneration. Unlike CMT4J, ALS11 is characterized by the degeneration of upper motor neurons in the brain and lower neurons in the spinal cord, causing paralysis and, ultimately, death.

REFERENCES

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- Chow, C.Y., et al. 2007. Mutation of FIG4 causes neurodegeneration in the pale tremor mouse and patients with CMT4J. *Nature* 448: 68-72.
- Zhang, Y., et al. 2007. Loss of Vac14, a regulator of the signaling lipid phosphatidylinositol 3,5-bisphosphate, results in neurodegeneration in mice. *Proc. Natl. Acad. Sci. USA* 104: 17518-17523.
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- Chow, C.Y., et al. 2009. Deleterious variants of FIG4, a phosphoinositide phosphatase, in patients with ALS. *Am. J. Hum. Genet.* 84: 85-88.
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CHROMOSOMAL LOCATION

Genetic locus: FIG4 (human) mapping to 6q21; Fig4 (mouse) mapping to 10 B1.

SOURCE

FIG4 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of FIG4 of human origin.

PRODUCT

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

APPLICATIONS

FIG4 (H-300) is recommended for detection of FIG4 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).

FIG4 (H-300) is also recommended for detection of FIG4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FIG4 siRNA (h): sc-72208, FIG4 siRNA (m): sc-72209, FIG4 shRNA Plasmid (h): sc-72208-SH, FIG4 shRNA Plasmid (m): sc-72209-SH, FIG4 shRNA (h) Lentiviral Particles: sc-72208-V and FIG4 shRNA (m) Lentiviral Particles: sc-72209-V.

Molecular Weight of FIG4: 104 kDa.

Positive Controls: HCT-116 whole cell lysate: sc-364175, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA

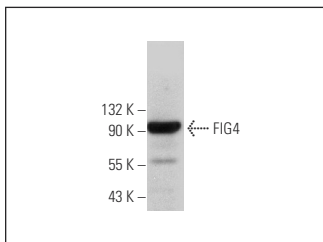


FIG4 (H-300): sc-98633. Western blot analysis of FIG4 expression in mouse brain tissue extract.

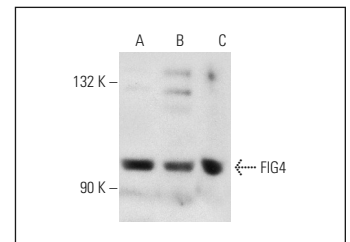


FIG4 (H-300): sc-98633. Western blot analysis of FIG4 expression in HCT-116 (A), Jurkat (B) and HL-60 (C) whole cell lysates.

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.