SANTA CRUZ BIOTECHNOLOGY, INC.

FRS3 (T-19): sc-161606

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FRS3 (fibroblast growth factor receptor substrate 3), also known as FRS2B (FRS2-β), is a 492 amino acid lipid-anchor adapter protein that contains one IRS-type PTB domain. Colocalizing to neural tissues with Tuj1, FRS3 functions as a feedback inhibitor of EGFR family members by preventing heterodimer formation between EGFR and ErbB2, thereby acting as a potential tumor suppressor. FRS3 is phosphorylated upon stimulation by FGF-2 or NGF and, acting as an adapter protein, links c-Fgr and NGF receptors to downstream signaling pathways. Interfering with the phosphorylation and nuclear translocation of ERK-2, FRS3 down-regulates ERK-2 expression. FRS3 likely interacts directly with GRB2, SH-PTP2, Flg, and Trk A, and may be involved in MAP kinase activation.

REFERENCES

1. Xu, H., et al. 1998. Novel recognition motif on fibroblast growth factor receptor mediates direct association and activation of SNT adapter proteins. J. Biol. Chem. 273: 17987-17990.
2. Ong, S.H., et al. 2000. FRS2 proteins recruit intracellular signaling pathways by binding to diverse targets on fibroblast growth factor and nerve growth factor receptors. Mol. Cell. Biol. 20: 979-989.
3. Zhou, L., et al. 2003. Genomic organization and comparative sequence analysis of the mouse and human FRS2, FRS3 genes. Mol. Biol. Rep. 30: 15-25.
4. Hoch, R.V., et al. 2006. Context-specific requirements for Fgfr1 signaling through Frs2 and Frs3 during mouse development. Development 133: 663-673.

CHROMOSOMAL LOCATION

Genetic locus: FRS3 (human) mapping to 6p21.1; Frs3 (mouse) mapping to 17 C.

SOURCE

FRS3 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FRS3 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-161606 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.

PROTOCOLS

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

APPLICATIONS

FRS3 (T-19) is recommended for detection of FRS3 of mouse, rat and, to a lesser extent, 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); non cross-reactive with FRS2.

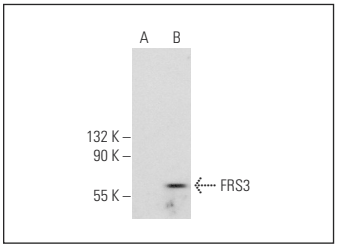
Suitable for use as control antibody for FRS3 siRNA (h): sc-95637, FRS3 siRNA (m): sc-145250, FRS3 shRNA Plasmid (h): sc-95637-SH, FRS3 shRNA Plasmid (m): sc-145250-SH, FRS3 shRNA (h) Lentiviral Particles: sc-95637-V and FRS3 shRNA (m) Lentiviral Particles: sc-145250-V.

Molecular Weight of FRS3: 54 kDa.

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



FRS3 (T-19): sc-161606. Western blot analysis of FRS3 expression in non-transfected: sc-117752 (**A**) and human FRS3 transfected: sc-111032 (**B**) 293T whole cell lysates.

RESEARCH USE

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