SANTA CRUZ BIOTECHNOLOGY, INC.

FRS2 (H-91): sc-8318

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FRS2 (also designated SNT or p90) is a lipid-anchored docking protein that becomes tyrosine phosphorylated in response to FGF or NGF stimulation and subsequently binds to GRB2/Sos complexes. The GRB2 adapter protein links receptor tyrosine kinases to the Ras/MAPK signaling pathway but does not interact directly with FGF receptors. FRS2 thus provides a link between activation of FGF and NGF receptors and the Ras/MAPK pathway. FRS2 contains four GRB2 binding sites, a myristylation sequence and a PTP domain. Myristylation of FRS2 is essential for membrane localization, tyrosine phosphorylation, GRB2/Sos recruitment and MAPK activation. The function of FRS2 in FGF receptor signaling is analogous to that of IRS-1 in response to Insulin receptor stimulation.

CHROMOSOMAL LOCATION

Genetic locus: FRS2 (human) mapping to 12q15; Frs2 (mouse) mapping to 10 D2.

SOURCE

FRS2 (H-91) is a rabbit polyclonal antibody raised against amino acids 258-348 of FRS2 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

FRS2 (H-91) is recommended for detection of FRS2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FRS2 (H-91) is also recommended for detection of FRS2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for FRS2 siRNA (h): sc-35413, FRS2 siRNA (m): sc-35414, FRS2 shRNA Plasmid (h): sc-35413-SH, FRS2 shRNA Plasmid (m): sc-35414-SH, FRS2 shRNA (h) Lentiviral Particles: sc-35413-V and FRS2 shRNA (m) Lentiviral Particles: sc-35414-V.

Molecular Weight of FRS2 phosphorylated: 60-90 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, ECV304 cell lysate: sc-2269 or MIA PaCa-2 cell lysate: sc-2285.

RESEARCH USE

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

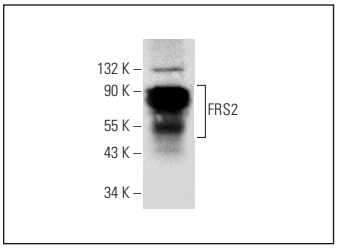
PROTOCOLS

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

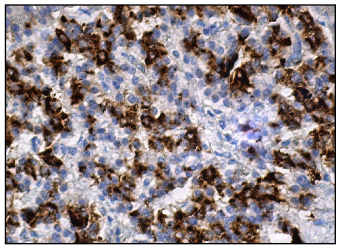
STORAGE

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

DATA



FRS2 (H-91): sc-8318. Western blot analysis of FRS2 expression in NIH/3T3 whole cell lysate.



FRS2 (H-91): sc-8318. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

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3. Sawada, T., et al. 2010. Ternary complex formation of EphA4, FGFR and FRS2α plays an important role in the proliferation of embryonic neural stem/progenitor cells. Genes Cells 15: 297-311.
4. Norambuena, A. and Schwartz, M.A. 2011. Effects of integrin-mediated cell adhesion on plasma membrane lipid raft components and signaling. Mol. Biol. Cell 22: 3456-3464.
5. Laederich, M.B., et al. 2011. Fibroblast growth factor receptor 3 (FGFR3) is a strong heat shock protein 90 (Hsp90) client: implications for therapeutic manipulation. J. Biol. Chem. 286: 19597-19604.
6. Tomasovic, A., et al. 2012. Molecular networks in FGF signaling: flotillin-1 and cbl-associated protein compete for the binding to fibroblast growth factor receptor substrate 2. PLoS ONE 7: e29739.
7. Chen, P.Y., et al. 2012. FGF regulates TGF-β signaling and endothelial-to-mesenchymal transition via control of let-7 miRNA expression. Cell Rep. 2: 1684-1696.
8. Wilson, T.R., et al. 2012. Widespread potential for growth-factor-driven resistance to anticancer kinase inhibitors. Nature 487: 505-509.