SANTA CRUZ BIOTECHNOLOGY, INC.

FGFR-4 (C-16): sc-124

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Acidic and basic fibroblast growth factors (FGFs) are members of a family of multifunctional polypeptide growth factors that stimulate proliferation of cells of mesenchymal, epithelial and neuroectodermal origin. Like other growth factors, FGFs act by binding and activating specific cell surface receptors. These include the Flg receptor or FGFR-1, the Bek receptor or FGFR-2, FGFR-3, FGFR-4, FGFR-5 and FGFR-6. These receptors usually contain an extracellular ligand-binding region containing three immunoglobulin-like domains, a transmembrane domain and a cytoplasmic tyrosine kinase domain. The gene encoding human FGFR-4, unlike the other FGFR genes, is alternatively spliced to produce only one isoform. It is expressed in fetal adrenal, lung, kidney, liver, pancreas, intestine, striated muscle and spleen tissues. FGFR-4 is also overexpressed in breast cancers and, subsequently, is a potential target for drug therapy.

CHROMOSOMAL LOCATION

Genetic locus: FGFR4 (human) mapping to 5q35.2.

SOURCE

FGFR-4 (C-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of FGFR-4 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.

Blocking peptide available for competition studies, sc-124 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-124 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

FGFR-4 (C-16) is recommended for detection of FGFR-4 of 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).

Suitable for use as control antibody for FGFR-4 siRNA (h): sc-35368, FGFR-4 shRNA Plasmid (h): sc-35368-SH and FGFR-4 shRNA (h) Lentiviral Particles: sc-35368-V.

Molecular Weight of unmodified FGFR-4: 88 kDa.

Molecular Weight of phosphorylated/glycosylated FGFR-4: 95-125 kDa.

Positive Controls: human small intestine extract: sc-364225, human liver extract: sc-363766 or HeLa whole cell lysate: sc-2200.

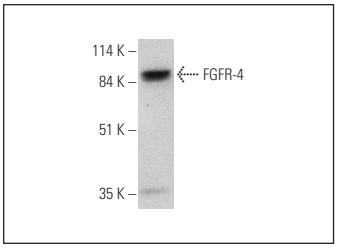
STORAGE

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

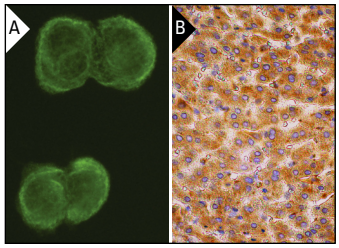
RESEARCH USE

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

DATA



FGFR-4 (C-16): sc-124. Western blot analysis of FGFR-4 expression in human small intestine tissue extract.



FGFR-4 (C-16): sc-124. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes cells (**B**).

SELECT PRODUCT CITATIONS

1. Munoz, R., et al. 1997. Effect of mutation of cytoplasmic receptor domain and of genistein on transport of acidic fibroblast growth factor into cells. Oncogene 15: 525-536.
2. Loilome, W., et al. 2009. Glioblastoma cell growth is suppressed by disruption of Fibroblast Growth Factor pathway signaling. J. Neurooncol. 94: 359-366.
3. Drafahl, K.A., et al. 2010. The receptor tyrosine kinase FGFR4 negatively regulates NFκB signaling. PLoS ONE 5: e14412.
4. Cerliani, J.P., et al. 2011. Associated expressions of FGFR-2 and FGFR-3: from mouse mammary gland physiology to human breast cancer. Breast Cancer Res. Treat. 133: 997-1008.
5. Durán, I., et al. 2011. Freeze substitution followed by low melting point wax embedding preserves histomorphology and allows protein and mRNA localization techniques. Microsc. Res. Tech. 74: 440-448.
6. Kuo, J.C., et al. 2011. Analysis of the myosin-II-responsive focal adhesion proteome reveals a role for β-Pix in negative regulation of focal adhesion maturation. Nat. Cell Biol. 13: 383-393.
7. 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.
8. Chell, V., et al. 2013. Tumour cell responses to new fibroblast growth factor receptor tyrosine kinase inhibitors and identification of a gatekeeper mutation in FGFR3 as a mechanism of acquired resistance. Oncogene 32: 3059-3070.
9. Ishigami, T., et al. 2013. The involvement of fibroblast growth factor receptor signaling pathways in dermatofibroma and dermatofibrosarcoma protuberans. J. Med. Invest. 60: 106-113.
10. Peláez-García, A., et al. 2013. FGFR4 role in epithelial-mesenchymal transition and its therapeutic value in colorectal cancer. PLoS ONE 8: e63695.