SANTA CRUZ BIOTECHNOLOGY, INC.

FGFR-4 (H-121): sc-9006

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; Fgfr4 (mouse) mapping to 13 B1.

SOURCE

FGFR-4 (H-121) is a rabbit polyclonal antibody raised against amino acids 25-145 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.

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.

APPLICATIONS

FGFR-4 (H-121) is recommended for detection of FGFR-4 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).

Suitable for use as control antibody for FGFR-4 siRNA (h): sc-35368, FGFR-4 siRNA (m): sc-39966, FGFR-4 shRNA Plasmid (h): sc-35368-SH, FGFR-4 shRNA Plasmid (m): sc-39966-SH, FGFR-4 shRNA (h) Lentiviral Particles: sc-35368-V and FGFR-4 shRNA (m) Lentiviral Particles: sc-39966-V.

Molecular Weight of unmodified FGFR-4: 88 kDa.

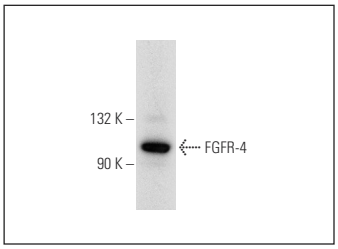
Molecular Weight of phosphorylated or glycosylated FGFR-4: 95-125 kDa.

Positive Controls: rat brain extract: sc-2392, MCF7 whole cell lysate: sc-2206 or Hep G2 cell lysate: sc-2227.

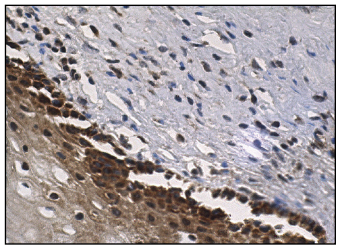
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



FGFR-4 (H-121): sc-9006. Western blot analysis of FGFR-4 expression in rat brain tissue extract.



FGFR-4 (H-121): sc-9006. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Kirby, J.L., et al. 2003. Characterization of fibroblast growth factor receptors expressed in principal cells in the initial segment of the rat epididymis. Biol. Reprod. 68: 2314-2321.
2. Yan, X., et al. 2005. Fibroblast growth factor 23 reduces expression of type IIa Na^+/Pi co-transporter by signaling through a receptor functionally distinct from the known FGFRs in opossum kidney cells. Genes Cells 10: 489-502.
3. Lania, G., et al. 2009. Early thyroid development requires a Tbx1-Fgf8 pathway. Dev. Biol. 328: 109-117.
4. Kakigi, A., et al. 2010. Expression of fibroblast growth factor receptors 1-4 in human chronic tympanic membrane perforation. ORL J. Otorhinolaryngol. Relat. Spec. 71: 67-70.
5. Cerliani, J.P., et al. 2011. Interaction between FGFR-2, STAT5, and progesterone receptors in breast cancer. Cancer Res. 71: 3720-3731.
6. 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.
7. Khuituan, P., et al. 2012. Fibroblast growth factor-23 abolishes 1,25-dihydroxyvitamin D_3-enhanced duodenal calcium transport in male mice. Am. J. Physiol. Endocrinol. Metab. 302: E903-E913.