SANTA CRUZ BIOTECHNOLOGY, INC.

FGFR-4 (A-10): sc-136988

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 (A-10) is a mouse monoclonal antibody raised against amino acids 25-145 of FGFR-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FGFR-4 (A-10) is available conjugated to agarose (sc-136988 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-136988 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136988 PE), fluorescein (sc-136988 FITC), Alexa Fluor® 488 (sc-136988 AF488), Alexa Fluor® 546 (sc-136988 AF546), Alexa Fluor® 594 (sc-136988 AF594) or Alexa Fluor® 647 (sc-136988 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-136988 AF680) or Alexa Fluor® 790 (sc-136988 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FGFR-4 (A-10) is recommended for detection of FGFR-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

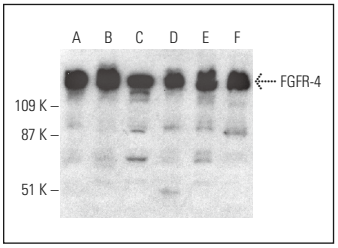
Molecular Weight of phosphorylated or glycosylated FGFR-4: 95-125 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or KNRK whole cell lysate: sc-2214.

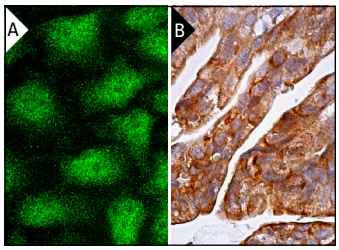
STORAGE

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

DATA



FGFR-4 (A-10) HRP: sc-136988 HRP. Direct western blot analysis of FGFR-4 expression in HeLa (**A**), NIH/3T3 (**B**), AMJ2-C8 (**C**), MCF7 (**D**), CSML0 (**E**) and KNRK (**F**) whole cell lysates.



FGFR-4 (A-10): sc-136988. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Fu, T., et al. 2012. Aberrantly elevated microRNA-34a in obesity attenuates hepatic responses to FGF19 by targeting a membrane coreceptor β-Klotho. Proc. Natl. Acad. Sci. USA 109: 16137-16142.
2. Fu, T., et al. 2016. FXR primes the liver for intestinal FGF15 signaling by transient induction of β-Klotho. Mol. Endocrinol. 30: 92-103.
3. Smith, E.R., et al. 2017. FGF23 is synthesised locally by renal tubules and activates injury-primed fibroblasts. Sci. Rep. 7: 3345.
4. Byun, S., et al. 2018. Postprandial FGF19-induced phosphorylation by Src is critical for FXR function in bile acid homeostasis. Nat. Commun. 9: 2590.
5. Turunen, S.P., et al. 2019. FGFR4 phosphorylates MST1 to confer breast cancer cells resistance to MST1/2-dependent apoptosis. Cell Death Differ. 26: 2577-2593.
6. Altunel, E., et al. 2020. Development of a precision medicine pipeline to identify personalized treatments for colorectal cancer. BMC Cancer 20: 592.
7. Typiak, M., et al. 2021. Role of klotho in hyperglycemia: its levels and effects on fibroblast growth factor receptors, glycolysis, and glomerular filtration. Int. J. Mol. Sci. 22: 7867.
8. Lampart, A., et al. 2022. Nuclear localization sequence of FGF1 is not required for its intracellular anti-apoptotic activity in differentiated cells. Cells 11: 522.
9. Chen, L., et al. 2023. Structural basis for FGF hormone signalling. Nature 618: 862-870.

RESEARCH USE

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