SANTA CRUZ BIOTECHNOLOGY, INC.

FGFR-3 (B-9): sc-13121

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-3 maps to chromosome 4p16.3 and is alternatively spliced to produce three isoforms that are expressed in brain, kidney and testis. Defects in FGFR-3 are associated with several diseases, including Crouzon syndrome, achondroplasia, thanatophoric dysplasia, craniosynostosis Adelaide type and hypochondroplasia. Mutations in FGFR-3 are also a cause of some bladder and cervical cancers.

CHROMOSOMAL LOCATION

Genetic locus: FGFR3 (human) mapping to 4p16.3.

SOURCE

FGFR-3 (B-9) is a mouse monoclonal antibody raised against amino acids 25-124 of FGFR-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FGFR-3 (B-9) is available conjugated to either Alexa Fluor® 546 (sc-13121 AF546) or Alexa Fluor® 594 (sc-13121 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13121 AF680) or Alexa Fluor® 790 (sc-13121 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

FGFR-3 (B-9) is recommended for detection of FGFR-3 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-3 siRNA (h): sc-29314, FGFR-3 shRNA Plasmid (h): sc-29314-SH and FGFR-3 shRNA (h) Lentiviral Particles: sc-29314-V.

Molecular Weight of FGFR-3 precursor: 125 kDa.

Molecular Weight of mature FGFR-3: 135 kDa.

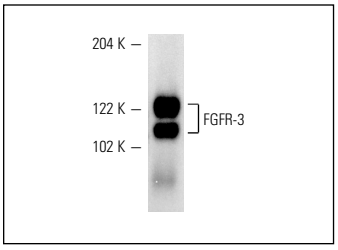
Molecular Weight of non-glycosylated FGFR-3: 97 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, T-47D cell lysate: sc-2293 or A549 cell lysate: sc-2413.

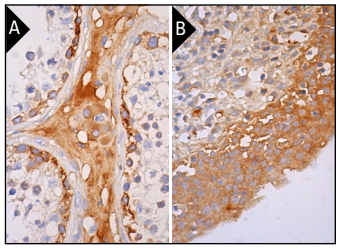
STORAGE

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

DATA



FGFR-3 (B-9): sc-13121. Western blot analysis of FGFR-3 expression in K-562 whole cell lysate.



FGFR-3 (B-9): sc-13121. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing membrane and cytoplasmic staining of subset of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Dvorak, P., et al. 2003. Increased expression of fibroblast growth factor receptor-3 in $CD34^+$ $Bcr\text{-}Abl^+$ cells from patients with chronic myeloid leukemia. Leukemia 17: 2418-2425.
2. Kossack, N., et al. 2013. A combined approach facilitates the reliable detection of human spermatogonia *in vitro*. Hum. Rep. 28: 3012-3025.
3. Xie, Z., et al. 2013. Plasma membrane proteomics identifies biomarkers associated with MMSET overexpression in T(4;14) multiple myeloma. Oncotarget 4: 1008-1018.
4. Guancial, E.A., et al. 2014. FGFR3 expression in primary and metastatic urothelial carcinoma of the bladder. Cancer Med. 3: 835-844.
5. Marek, L.A., et al. 2014. Nonamplified FGFR1 is a growth driver in malignant pleural mesothelioma. Mol. Cancer Res. 12: 1460-1469.
6. Di Stefano, A.L., et al. 2015. Detection, characterization, and inhibition of FGFR-TACC fusions in IDH wild-type glioma. Clin. Cancer Res. 21: 3307-3317.
7. Park, S., et al. 2016. VEGF and Ki-67 overexpression in predicting poor overall survival in adenoid cystic carcinoma. Cancer Res. Treat. 48: 518-526.
8. Koole, K., et al. 2016. Fibroblast growth factor receptor 3 protein is overexpressed in oral and oropharyngeal squamous cell carcinoma. Cancer Med. 5: 275-284.
9. Rizvi, S., et al. 2016. A hippo and fibroblast growth factor receptor autocrine pathway in cholangiocarcinoma. J. Biol. Chem. 291: 8031-8047.
10. Blanca, A., et al. 2016. FGFR3 and Cyclin D3 as urine biomarkers of bladder cancer recurrence. Biomark. Med. 10: 243-253.

RESEARCH USE

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