SANTA CRUZ BIOTECHNOLOGY, INC.

FTβ (B-7): sc-46664

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mammalian protein farnesyl transferases are heterodimeric proteins containing two nonidentical α and β subunits that attach farnesyl residues to a cysteine at the fourth position from the COOH terminus of several proteins, including nuclear lamins and p21Ras proteins. The natural substrates contain the Cys-A-A-Xaa recognition sequence, where the A residues are aliphatic and Xaa represents methionine, serine, glutamine or cysteine. The purified farnesyl transferase is an a-b heterodimer. The β subunit, which is known as FTβ, CAAX farnesyltransferase subunit β, or Ras proteins prenyltransferase subunit β, is a 437 amino acid protein that contains five PFTB repeats and binds the peptide substrate. The α subunit is suspected to participate in formation of a stable complex with the substrate farnesyl pyrophosphate.

CHROMOSOMAL LOCATION

Genetic locus: FNTB (human) mapping to 14q23.3; Fntb (mouse) mapping to 12 C3.

SOURCE

FTβ (B-7) is a mouse monoclonal antibody raised against amino acids 138-437 of FTβ of human origin.

PRODUCT

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

FTβ (B-7) is available conjugated to agarose (sc-46664 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-46664 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46664 PE), fluorescein (sc-46664 FITC), Alexa Fluor® 488 (sc-46664 AF488), Alexa Fluor® 546 (sc-46664 AF546), Alexa Fluor® 594 (sc-46664 AF594) or Alexa Fluor® 647 (sc-46664 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46664 AF680) or Alexa Fluor® 790 (sc-46664 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

FTβ (B-7) is recommended for detection of FTβ of mouse, rat and human origin by Western Blotting (starting dilution 1:50, dilution range 1:50-1:1000), 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FTβ siRNA (h): sc-35417, FTβ siRNA (m): sc-35418, FTβ siRNA (r): sc-77354, FTβ shRNA Plasmid (h): sc-35417-SH, FTβ shRNA Plasmid (m): sc-35418-SH, FTβ shRNA Plasmid (r): sc-77354-SH, FTβ shRNA (h) Lentiviral Particles: sc-35417-V, FTβ shRNA (m) Lentiviral Particles: sc-35418-V and FTβ shRNA (r) Lentiviral Particles: sc-77354-V.

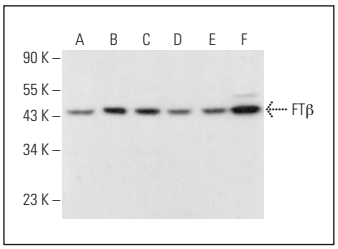
Molecular Weight of FTβ: 46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

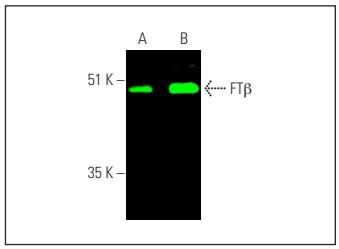
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FTβ (B-7): sc-46664. Western blot analysis of FTβ expression in NIH/3T3 (**A**), 3T3-L1 (**B**), HeLa (**C**), K-562 (**D**), Daudi (**E**) and PC-12 (**F**) whole cell lysates.



FTβ (B-7): sc-46664. Near-infrared western blot analysis of FTβ expression in NIH/3T3 (**A**) and 3611-RF (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Scott, A.N., et al. 2008. Farnesyltransferase inhibitors target multiple endothelial cell functions in angiogenesis. Angiogenesis 11: 337-346.
2. Hagemann, A., et al. 2017. Exploring the putative self-binding property of the human farnesyltransferase α-subunit. FEBS Lett. 591: 3637-3648.
3. Assi, M., et al. 2020. A novel KRAS antibody highlights a regulation mechanism of post-translational modifications of KRAS during tumorigenesis. Int. J. Mol. Sci. 21: 6361.
4. Hagemann, A., et al. 2022. Impact of a conserved N-terminal proline-rich region of the α-subunit of CAAX-prenyltransferases on their enzyme properties. Cell Commun. Signal. 20: 118.

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.

PROTOCOLS

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