

# FT $\beta$ (B-7): sc-46664

## BACKGROUND

Mammalian protein farnesyl transferases are heterodimeric proteins containing two nonidentical  $\alpha$  and  $\beta$  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  $\alpha$ - $\beta$  heterodimer. The  $\beta$  subunit, which is known as FT $\beta$ , CAAX farnesyltransferase subunit  $\beta$ , or Ras proteins prenyltransferase subunit  $\beta$ , is a 437 amino acid protein that contains five PFTB repeats and binds the peptide substrate. The  $\alpha$  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

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

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## APPLICATIONS

FT $\beta$  (B-7) is recommended for detection of FT $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:50, dilution range 1:50-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 FT $\beta$  siRNA (h): sc-35417, FT $\beta$  siRNA (m): sc-35418, FT $\beta$  siRNA (r): sc-77354, FT $\beta$  shRNA Plasmid (h): sc-35417-SH, FT $\beta$  shRNA Plasmid (m): sc-35418-SH, FT $\beta$  shRNA Plasmid (r): sc-77354-SH, FT $\beta$  shRNA (h) Lentiviral Particles: sc-35417-V, FT $\beta$  shRNA (m) Lentiviral Particles: sc-35418-V and FT $\beta$  shRNA (r) Lentiviral Particles: sc-77354-V.

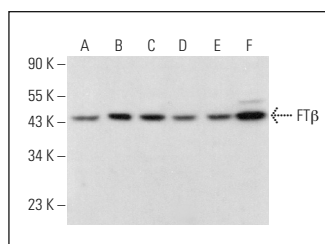
Molecular Weight of FT $\beta$ : 46 kDa.

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

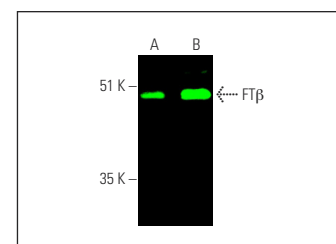
## RECOMMENDED SUPPORT REAGENTS

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

## DATA



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



FT $\beta$  (B-7): sc-46664. Near-infrared western blot analysis of FT $\beta$  expression in NIH/3T3 (A) and 3611-RF (B) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgG $\kappa$  BP-CFL 680: sc-516180.

## SELECT PRODUCT CITATIONS

- Scott, A.N., et al. 2008. Farnesyltransferase inhibitors target multiple endothelial cell functions in angiogenesis. *Angiogenesis* 11: 337-346.
- Hagemann, A., et al. 2017. Exploring the putative self-binding property of the human farnesyltransferase  $\alpha$ -subunit. *FEBS Lett.* 591: 3637-3648.
- 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.

## 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](http://www.scbt.com) for detailed protocols and support products.