SANTA CRUZ BIOTECHNOLOGY, INC.

FTβ (H-300): sc-13965

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 α-β heterodimer. The β subunit binds the peptide substrate while the α subunit, which is known as FTβ, CAAX farnesyltransferase subunit β, or Ras proteins prenyltransferase subunit β, is a 437 amino acid protein that contains 5 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.

REFERENCES

1. Clarke, S., et al. 1988. Post-translational modification of the Ha-ras oncogene protein: evidence for a third class of protein carboxyl methyltransferases. Proc. Natl. Acad. Sci. USA 85: 4643-4647.
2. Reiss, Y., et al. 1990. Inhibition of purified p21ras farnesyl: protein transferase by Cys-A-A-X tetrapeptides. Cell 62: 81-88.
3. Reiss, Y., et al. 1991. Sequence requirement for peptide recognition by rat brain p21ras protein farnesyl transferase. Proc. Natl. Acad. Sci. USA 88: 732-736.
4. Moores, S.L., et al. 1991. Sequence dependence of protein isoprenylation. J. Biol. Chem. 266: 14603-14610.
5. Seabra, M.C., et al. 1991. Protein farnesyl transferase and geranylgeranyltransferase share a common α subunit. Cell 65: 429-434.
6. Chen, W.J., et al. 1991. Cloning and expression of a cDNA encoding the α subunit of rat p21ras protein farnesyl transferase. Proc. Natl. Acad. Sci. USA 88: 11368-11372.

CHROMOSOMAL LOCATION

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

SOURCE

FTβ (H-300) is a rabbit polyclonal antibody raised against amino acids 138-437 of FTβ 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

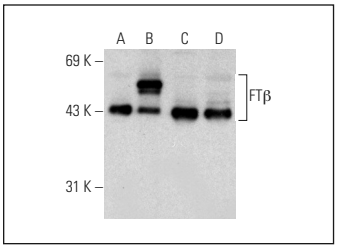
FTβ (H-300) is recommended for detection of FTβ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

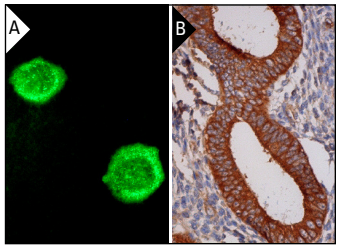
Molecular Weight of FTβ: 46 kDa.

Positive Controls: JAR cell lysate: sc-2276, FTβ (h3): 293T Lysate: sc-158522 or A-431 whole cell lysate: sc-2201.

DATA



FTβ (H-300): sc-13965. Western blot analysis of FTβ expression in non-transfected 293T: sc-117752 (**A**), human FTβ transfected 293T: sc-158522 (**B**), A-431 (**C**) and JAR (**D**) whole cell lysates.



FTβ (H-300): sc-13965. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pre-menopausal uterus tissue showing cytoplasmic staining of glandular cells (**B**).

PROTOCOLS

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