

# FT $\alpha$ (B-1): sc-390757

## 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 binds the peptide substrate while the  $\alpha$  subunit is suspected to participate in formation of a stable complex with the substrate farnesyl pyrophosphate. The  $\alpha$  subunit is shared with a second prenyltransferase, geranylgeranyl transferase, that attaches 20 carbon geranylgeranyl to Ras-related proteins that terminate in a Cys-A-A-Xaa recognition site in which Xaa is leucine.

## REFERENCES

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2. Reiss, Y., et al. 1990. Inhibition of purified p21Ras farnesyl: protein transferase by Cys-AAX tetrapeptides. *Cell* 62: 81-88.
3. Reiss, Y., et al. 1991. Sequence requirement for peptide recognition by rat brain p21Ras protein farnesyltransferase. *Proc. Natl. Acad. Sci. USA* 88: 732-736.
4. Chen, W.J., et al. 1991. Cloning and expression of a cDNA encoding the  $\alpha$  subunit of rat p21<sup>ras</sup> protein farnesyltransferase. *Proc. Natl. Acad. Sci. USA* 88: 11368-11372.
5. Reiss, Y., et al. 1991. Nonidentical subunits of p21H-Ras farnesyltransferase. *J. Biol. Chem.* 266: 10672-10677.
6. Moores, S.L., et al. 1991. Sequence dependence of protein isoprenylation. *J. Biol. Chem.* 266: 14603-14610.
7. Seabra, M.C., et al. 1991. Protein farnesyltransferase and geranylgeranyltransferase share a common  $\alpha$  subunit. *Cell* 65: 429-434.
8. Andres, D.A., et al. 1993. cDNA cloning of the two subunits of human CAAX farnesyltransferase and chromosomal mapping of FNTA and FNTB loci and related sequences. *Genomics* 18: 105-112.
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## CHROMOSOMAL LOCATION

Genetic locus: FNTA (human) mapping to 8p11.21; Fnta (mouse) mapping to 8 A2.

## SOURCE

FT $\alpha$  (B-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 353-377 of FT $\alpha$  of rat origin.

## RESEARCH USE

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

## 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.

Blocking peptide available for competition studies, sc-390757 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

FT $\alpha$  (B-1) is recommended for detection of FT $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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 $\alpha$  siRNA (h): sc-35420, FT $\alpha$  siRNA (m): sc-35419, FT $\alpha$  shRNA Plasmid (h): sc-35420-SH, FT $\alpha$  shRNA Plasmid (m): sc-35419-SH, FT $\alpha$  shRNA (h) Lentiviral Particles: sc-35420-V and FT $\alpha$  shRNA (m) Lentiviral Particles: sc-35419-V.

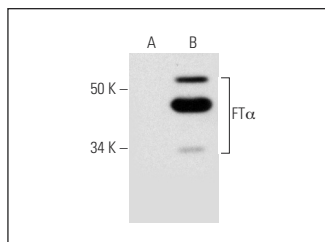
Molecular Weight of FT $\alpha$ : 49 kDa.

Positive Controls: FT $\alpha$  (m): 293T Lysate: sc-120327.

## 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™ 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



FT $\alpha$  (B-1): sc-390757. Western blot analysis of FT $\alpha$  expression in non-transfected: sc-117752 (A) and mouse FT $\alpha$  transfected: sc-120327 (B) 293T whole cell lysates.

## STORAGE

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