SANTA CRUZ BIOTECHNOLOGY, INC.

FTα (Y-53): sc-136

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 aβ heterodimer. The β subunit binds the peptide substrate while the a subunit is suspected to participate in formation of a stable complex with the substrate farnesyl pyrophosphate. The a 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.

CHROMOSOMAL LOCATION

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

SOURCE

FTα (Y-53) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of FTα of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FTα (Y-53) is recommended for detection of FTα 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), 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 FTα siRNA (h): sc-35420, FTα siRNA (m): sc-35419, FTα shRNA Plasmid (h): sc-35420-SH, FTα shRNA Plasmid (m): sc-35419-SH, FTα shRNA (h) Lentiviral Particles: sc-35420-V and FTα shRNA (m) Lentiviral Particles: sc-35419-V.

Molecular Weight of FTα: 49 kDa.

Positive Controls: FTα (m): 293T Lysate: sc-120327, NIH/3T3 Whole Cell Lysate : sc-2210 or Jurkat Whole Cell Lysate : sc-2204.

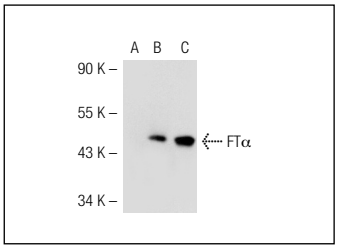
STORAGE

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

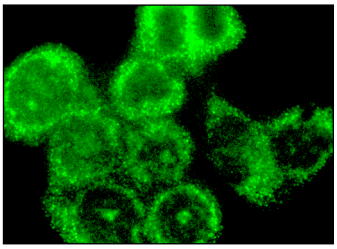
RESEARCH USE

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

DATA



FTα (Y-53): sc-136. Western blot analysis of FTα expression in non-transfected 293T: sc-117752 (**A**), mouse FTα transfected 293T: sc-120327 (**B**) and NIH/3T3 (**C**) whole cell lysates.



FTα (Y-53): sc-136. Immunofluorescence staining of methanol-fixed HeLa cells showing perinuclear localization.

SELECT PRODUCT CITATIONS

1. Kumar, A., et al. 1997. p21Ras farnesyltransferase α- and β-subunits are phosphorylated in PC-12 cells: TGFβ signaling pathway independent phosphorylation. Neurosci. Lett. 231: 143-146.
2. Ibrahim, M., et al. 2001. Identification and characterisation of *Toxoplasma gondii* protein farnesyltransferase. Int. J. Parasitol. 31: 1489-1497.
3. Kezele, P., et al. 2005. Keratinocyte growth factor acts as a mesenchymal factor that promotes ovarian primordial to primary follicle transition. Biol. Reprod. 73: 967-973.
4. Garamszegi, N., et al. 2011. Matrix metalloproteinase-1 contribution to sarcoma cell invasion. J. Cell. Mol. Med. 16: 1331-1341.
5. Yang, W., et al. 2011. Farnesyltransferase inhibitor FTI-277 reduces mortality of septic mice along with improved bacterial clearance. J. Pharmacol. Exp. Ther. 339: 832-841.
6. Koutsimpelas, D., et al. 2012. The VEGF/VEGF-R axis in sporadic vestibular schwannomas correlates with irradiation and disease recurrence. ORL J. Otorhinolaryngol. Relat. Spec. 74: 330-338.

PROTOCOLS

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