

# FTS (KK-L5): sc-134343

## BACKGROUND

Fused toes protein homolog (FTS), also known as AKT-interacting protein (AKTIP) and Ft1, is a 292 amino acid protein that localizes to the cytoplasm and the cell membrane. A member of the ubiquitin-conjugating enzyme family, FTS binds directly to AKT1 to regulate apoptosis in a cell population. AKT1 is a protein that plays a critical role in a number of cellular responses, such as cell growth, protein synthesis, and antiapoptotic signaling. The interaction of FTS and AKT1 enhances the phosphorylation and activation of AKT1, which, through an AKT1/GSK-3 $\beta$ /NFATc1 signaling cascade, results in the increased production of the proapoptotic hormone Fas ligand and thus an increase in apoptosis.

## REFERENCES

- Lesche, R., et al. 1997. Ft1, a novel gene related to ubiquitin-conjugating enzymes, is deleted in the Fused toes mouse mutation. *Mamm. Genome* 8: 879-883.
- Lesche, R. and R  ther, U. 1998. Close linkage of p130 and Ft1 is conserved among mammals. *Mamm. Genome* 9: 253-255.
- Wick, M.J., et al. 2000. Mechanism of phosphorylation of protein kinase B/ Akt by a constitutively active 3-phosphoinositide-dependent protein kinase-1. *J. Biol. Chem.* 275: 40400-40406.

## CHROMOSOMAL LOCATION

Genetic locus: AKTIP (human) mapping to 16q12.2; Aktip (mouse) mapping to 8 C5.

## SOURCE

FTS (KK-L5) is a mouse monoclonal antibody raised against recombinant FTS protein of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

FTS (KK-L5) is recommended for detection of FTS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FTS siRNA (h): sc-93013, FTS siRNA (m): sc-145262, FTS shRNA Plasmid (h): sc-93013-SH, FTS shRNA Plasmid (m): sc-145262-SH, FTS shRNA (h) Lentiviral Particles: sc-93013-V and FTS shRNA (m) Lentiviral Particles: sc-145262-V.

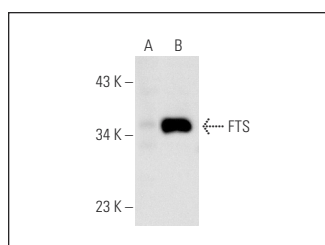
Molecular Weight of FTS: 33 kDa.

Positive Controls: FTS (m): 293T Lysate: sc-120330, NIH/3T3 whole cell lysate: sc-2210 or human FTS transfected 293T whole cell lysate.

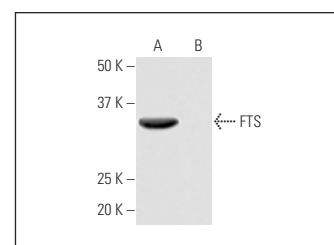
## RECOMMENDED SUPPORT REAGENTS

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>TM</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).

## DATA



FTS (KK-L5): sc-134343. Western blot analysis of FTS expression in non-transfected: sc-117752 (A) and mouse FTS transfected: sc-120330 (B) 293T whole cell lysates.



FTS (KK-L5): sc-134343. Western blot analysis of FTS expression in human FTS transfected (A) and non-transfected (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Subramanian, P.D., et al. 2016. Silencing of fused toes homolog enhances cisplatin sensitivity in cervical cancer cells by inhibiting epidermal growth factor receptor-mediated repair of DNA damage. *Cancer Chemother. Pharmacol.* 78: 753-762.
- Prabakaran, D.S., et al. 2019. Silencing of FTS increases radiosensitivity by blocking radiation-induced Notch1 activation and spheroid formation in cervical cancer cells. *Int. J. Biol. Macromol.* 126: 1318-1325.
- D S, P., et al. 2022. Fused toes homolog, a potential molecular regulator of human papillomavirus type 16 E6 and E7 oncoproteins in cervical cancer. *PLoS ONE* 17: e0266532.
- Ng, A.S.N., et al. 2022. AKTIP loss is enriched in ER $\alpha$ -positive breast cancer for tumorigenesis and confers endocrine resistance. *Cell Rep.* 41: 111821.

## STORAGE

Store at 4 $^{\circ}$  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.