

Fer (h): 293T Lysate: sc-128617

BACKGROUND

Fer (p94) is a non-receptor protein-tyrosine kinase (nRTK) of the Fes/Fps family, which shares a functional (SH2) domain and is involved in signaling pathways through receptor tyrosine kinases (RTK) and cytokine receptors. The Fes/Fps family is distinct from c-Src, c-Abl and related nRTKs and was originally distinguished as a homolog to retroviral oncoproteins. *In vivo*, Fer kinase assembles into homotrimers via conserved coiled-coil domains. The N-terminal coiled-coil domains of Fer can autophosphorylate in *trans*, thereby regulating their cellular function through differential phosphorylation states. Growth factor exposure can induce tyrosine phosphorylation of Fer and recruitment of Fer to RTK complexes containing p85. Fer is implicated in Insulin signaling, cell-cell signaling, human prostatic proliferative diseases, and is involved in the regulation of G₁ progression.

REFERENCES

1. Smithgall, T.E., et al. 1998. The c-Fes family of protein-tyrosine kinases. *Crit. Rev. Oncog.* 9: 43-62.
2. Craig, A.W., et al. 1999. Disruption of coiled-coil domains in Fer protein-tyrosine kinase abolishes trimerization but not kinase activation. *J. Biol. Chem.* 274: 19934-19942.
3. Priel-Halachmi, S., et al. 2000. FER kinase activation of Stat3 is determined by the N-terminal sequence. *J. Biol. Chem.* 275: 28902-28910.
4. Iwanishi, M., et al. 2000. The protein tyrosine kinase Fer associates with signaling complexes containing Insulin receptor substrate-1 and phosphatidylinositol 3-kinase. *J. Biol. Chem.* 275: 38995-39000.
5. Orlovsky, K., et al. 2000. N-terminal sequences direct the autophosphorylation states of the FER tyrosine kinases *in vivo*. *Biochemistry* 39: 11084-11091.

CHROMOSOMAL LOCATION

Genetic locus: FER (human) mapping to 5q21.3.

PRODUCT

Fer (h): 293T Lysate represents a lysate of human Fer transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Fer (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Fer antibodies. Recommended use: 10-20 µl per lane.

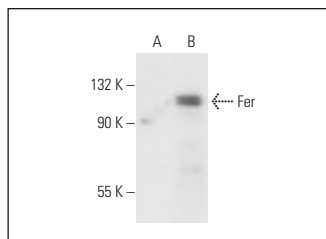
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Fer (2358C3a): sc-81272 is recommended as a positive control antibody for Western Blot analysis of enhanced human Fer expression in Fer transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RESEARCH USE

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

DATA



Fer (2358C3a): sc-81272. Western blot analysis of Fer expression in non-transfected: sc-117752 (A) and human Fer transfected: sc-128617 (B) 293T whole cell lysates.

PROTOCOLS

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