

Fer (H-180): sc-28771

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.

CHROMOSOMAL LOCATION

Genetic locus: FER (human) mapping to 5q21.3; Fert2 (mouse) mapping to 17 E1.1.

SOURCE

Fer (H-180) is a rabbit polyclonal antibody raised against amino acids 101-280 mapping near the N-terminus of Fer 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.

PROTOCOLS

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

APPLICATIONS

Fer (H-180) is recommended for detection of Fer 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).

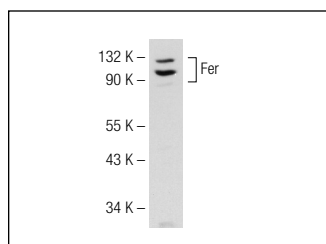
Fer (H-180) is also recommended for detection of Fer in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Fer siRNA (h): sc-39021, Fer siRNA (m): sc-39022, Fer shRNA Plasmid (h): sc-39021-SH, Fer shRNA Plasmid (m): sc-39022-SH, Fer shRNA (h) Lentiviral Particles: sc-39021-V and Fer shRNA (m) Lentiviral Particles: sc-39022-V.

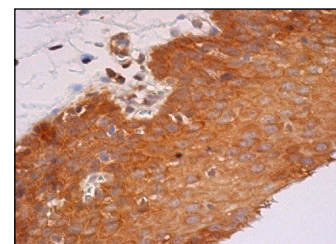
Molecular Weight of Fer: 94 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MDA-MB-231 cell lysate: sc-2232 or T-47D cell lysate: sc-2293.

DATA



Fer (H-180): sc-28771. Western blot analysis of Fer expression in Jurkat whole cell lysate.



Fer (H-180): sc-28771. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Chiu, Y.J., et al. 2008. Mechanotransduction in an extracted cell model: Fyn drives stretch- and flow-elicited PECAM-1 phosphorylation. *J. Cell Biol.* 182: 753-763.
2. Parguina, A.F., et al. 2012. A detailed proteomic analysis of rhodocytin-activated platelets reveals novel clues on the CLEC-2 signalosome: implications for CLEC-2 signaling regulation. *Blood* 120: e1117-e1126.



Try **Fer (C-1): sc-390484** or **Fer (5D2C4): sc-81708**, our highly recommended monoclonal alternatives to Fer (H-180).