

## Fer (K-15): sc-30707

### 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 G<sub>1</sub> 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.
6. Allard, P., et al. 2000. Links between Fer-tyrosine kinase expression levels and prostate cell proliferation. *Mol. Cell. Endocrinol.* 159: 63-77.

### CHROMOSOMAL LOCATION

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

### SOURCE

Fer (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-30707 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### APPLICATIONS

Fer (K-15) 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), 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).

Fer (K-15) 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: NIH/3T3 whole cell lysate: sc-2210, Jurkat whole cell lysate: sc-2204 or T-47D cell lysate: sc-2293.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### 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) or our catalog for detailed protocols and support products.



Try **Fer (C-1): sc-390484** or **Fer (5D2C4): sc-81708**, our highly recommended monoclonal alternatives to Fer (K-15).