

# c-Fgr (D-6): sc-74542

## BACKGROUND

Src is the human homolog of the v-Src gene of the rous sarcoma virus, also designated avian sarcoma virus or ASV. Src was the first proto-oncogenic non-receptor tyrosine kinase characterized in human. The Src family, which has common structural motifs, is composed of nine members in vertebrates, including Src, Yes, Fgr, Frk, Fyn, Lyn, Hck, Lck and Blk. Src-family kinases transduce signals that are involved in the control of a variety of cellular processes, including proliferation, differentiation, motility and adhesion. Src-family kinases contain an amino-terminal cell membrane anchor followed by an SH3 domain and an SH2 domain, which are involved in modular association and activation, respectively. Src-family kinases are normally maintained in an inactive state and can be activated transiently during cellular events such as mitosis. Different subcellular localizations of Src-family kinases may be important for the regulation of specific cellular processes such as mitogenesis, cytoskeletal organization and membrane trafficking. c-Fgr is a human non-receptor tyrosine kinase family member that was discovered by using a probe toward the v-Fgr portion of the cell-derived domain of Gardner-Rasheed feline sarcoma virus. The human c-Fgr gene encodes a 529 amino acid protein.

## REFERENCES

1. Sakaguchi, A.Y., et al. 1982. Organization of human proto-oncogenes. *Am. J. Hum. Genet.* 34: 175.
2. Tronick, S.R., et al. 1985. Isolation and chromosomal localization of the human fgr protooncogene, a distinct member of the tyrosine kinase gene family. *Proc. Natl. Acad. Sci. USA* 82: 6595-6599.
3. Williams, J.C., et al. 1998. Insights into Src kinase functions: structural comparisons. *Trends Biochem. Sci.* 23: 179-184.
4. Tatosyan, A.G., et al. 2000. Kinases of the Src family: structure and functions. *Biochemistry* 65: 49-58.

## CHROMOSOMAL LOCATION

Genetic locus: Fgr (mouse) mapping to 4 D2.3.

## SOURCE

c-Fgr (D-6) is a mouse monoclonal antibody raised against amino acids 4-63 mapping at the N-terminus of c-Fgr of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

c-Fgr (D-6) is available conjugated to agarose (sc-74542 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74542 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74542 PE), fluorescein (sc-74542 FITC), Alexa Fluor® 488 (sc-74542 AF488), Alexa Fluor® 546 (sc-74542 AF546), Alexa Fluor® 594 (sc-74542 AF594) or Alexa Fluor® 647 (sc-74542 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74542 AF680) or Alexa Fluor® 790 (sc-74542 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

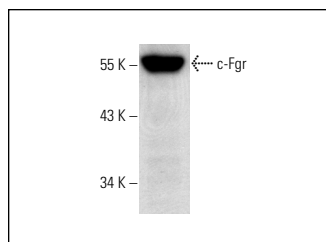
c-Fgr (D-6) is recommended for detection of c-Fgr p55 of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for c-Fgr siRNA (m): sc-39230, c-Fgr shRNA Plasmid (m): sc-39230-SH and c-Fgr shRNA (m) Lentiviral Particles: sc-39230-V.

Molecular Weight of c-Fgr: 55 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

## DATA



c-Fgr (D-6): sc-74542. Western blot analysis of c-Fgr expression in RAW 264.7 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Shimanaka, Y., et al. 2017. ω-3 fatty acid epoxides are autocrine mediators that control the magnitude of IgE-mediated mast cell activation. *Nat. Med.* 23: 1287-1297.
2. Huang, T., et al. 2020. Fgr contributes to hemorrhage-induced thalamic pain by activating NFκB/ERK1/2 pathways. *JCI Insight* 5: e139987.
3. Kralova, J., et al. 2021. The receptor-type protein tyrosine phosphatase CD45 promotes onset and severity of IL-1β-mediated autoinflammatory osteomyelitis. *J. Biol. Chem.* 297: 101131.
4. Mukherjee, A., et al. 2021. Ionizing irradiation-induced Fgr in senescent cells mediates fibrosis. *Cell Death Discov.* 7: 349.
5. Mukherjee, A., et al. 2023. Inhibition of tyrosine kinase Fgr prevents radiation-induced pulmonary fibrosis (RIPF). *Cell Death Discov.* 9: 252.

## 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](http://www.scbt.com) for detailed protocols and support products.