

Lfc (K-17): sc-9334

BACKGROUND

Guanine nucleotide exchange factors (GEFs) regulate the activity of the small GTP-binding proteins of the Ras superfamily. The Ras family of proteins participate in a diverse array of functions, including signal transduction, cytoskeleton dynamics and intracellular trafficking. Ras proteins cycle between a biologically inactive GDP-bound state and an active GTP-bound state. GEFs catalyze the release of GDP from inactive Ras proteins to enable GTP binding. Lfc, also designated Rho/Rac guanine nucleotide exchange factor 2, lymphoid blast crisis-like 1, ARHGEF2, GEF-H1, KIAA0651 and LFP40, is an 894 amino acid GEF for RhoA, a member of the Ras family that regulates the Actin cytoskeleton during the formation of stress fibers. Lfc directly interacts with cingulin, a junctional adapter that inhibits RhoA, thus preventing phorbol-12-myristate-13-acetate-induced contraction and apoptosis. Mutations in the p53 gene transcriptionally activate Lfc, thereby increasing tumor cell proliferation.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ARHGEF2 (human) mapping to 1q22; Arhgef2 (mouse) mapping to 3 F1.

SOURCE

Lfc (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Lfc 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-9334 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Lfc (K-17) is recommended for detection of Lfc 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).

Lfc (K-17) is also recommended for detection of Lfc in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Lfc siRNA (h): sc-41723, Lfc siRNA (m): sc-41724, Lfc shRNA Plasmid (h): sc-41723-SH, Lfc shRNA Plasmid (m): sc-41724-SH, Lfc shRNA (h) Lentiviral Particles: sc-41723-V and Lfc shRNA (m) Lentiviral Particles: sc-41724-V.

Molecular Weight of Lfc: 100 kDa.

Positive Controls: MES-SA/Dx5 cell lysate: sc-2284, PC-3 cell lysate: sc-2220 or NIH/3T3 whole cell lysate: sc-2210.

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.

SELECT PRODUCT CITATIONS

- Tsuji, T., et al. 2010. Involvement of p114-RhoGEF and Lfc in Wnt-3α- and dishevelled-induced RhoA activation and neurite retraction in N1E-115 mouse neuroblastoma cells. *Mol. Biol. Cell* 21: 3590-3600.

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.