SANTA CRUZ BIOTECHNOLOGY, INC.

GRAF (N-17): sc-47889

BACKGROUND

Cellular signaling by G proteins is downregulated by GTPase-activating proteins (GAPs), which increase the rate of GTP hydroylsis. The GTPase regulator associated with focal adhesion kinase (GRAF) has GAP activity toward Rho A and Cdc42, but not Rac 1. GRAF is ubiquitously expressed with high levels in heart and brain. Expression of GRAF causes clearing of stress fibers and formation of long actin based filopodial-like extensions. Fusion of MLL with GRAF, MLL/GRAF, is included in a rare genetic subgroup of acute myeloid leukemia (AML) cases.

REFERENCES

1. Taylor, J.M., et al. 1998. Characterization of GRAF, the GTPase-activating protein for Rho associated with focal adhesion kinase. Phosphorylation and possible regulation by mitogen-activated protein kinase. J. Biol. Chem. 273: 8063-8070.
2. Taylor, J.M., et al. 1999. Cytoskeletal changes induced by GRAF, the GTPase regulator associated with focal adhesion kinase, are mediated by Rho. J. Cell Sci. 112: 231-242.
3. Sheffield, P.J., et al. 1999. Expression, purification and crystallization of a BH domain from the GTPase regulatory protein associated with focal adhesion kinase. Acta Crystallogr. D Biol. Crystallogr. 55: 356-359.
4. Borkhardt, A., et al. 2000. The human GRAF gene is fused to MLL in a unique t(5;11)(q31;q23) and both alleles are disrupted in three cases of myelodysplastic syndrome/acute myeloid leukemia with a deletion 5q. Proc. Natl. Acad. Sci. USA 97: 9168-9173.
5. Longenecker, K.L., et al. 2001. Structure of the BH domain from GRAF and its implications for Rho GTPase recognition. J. Biol. Chem. 275: 38605-38610.
6. Shibata, H., et al. 2001. PKNβ interacts with the SH3 domains of GRAF and a novel GRAF related protein, GRAF2, which are GTPase activating proteins for Rho family. J. Biochem. 130: 23-31.
7. Panagopoulos, I., et al. 2004. MLL/GRAF fusion in an infant acute monocytic leukemia (AML M5β) with a cytogenetically cryptic ins(5;11)(q31;q23q23). Genes Chromosomes Cancer 41: 400-404.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP26 (human) mapping to 5q31.3; Arhgap26 (mouse) mapping to 18 B3.

SOURCE

GRAF (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GRAF 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-47888 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GRAF (N-17) is recommended for detection of GRAF of mouse 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).

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

Suitable for use as control antibody for GRAF siRNA (h): sc-60755, GRAF siRNA (m): sc-60756, GRAF shRNA Plasmid (h): sc-60755-SH, GRAF shRNA Plasmid (m): sc-60756-SH, GRAF shRNA (h) Lentiviral Particles: sc-60755-V and GRAF shRNA (m) Lentiviral Particles: sc-60756-V.

Molecular Weight of GRAF: 95 kDa.

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.

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.