SANTA CRUZ BIOTECHNOLOGY, INC.

Flg (H-76): sc-7945

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Acidic and basic fibroblast growth factors (FGFs) are members of a family of multifunctional polypeptide growth factors that stimulate proliferation of cells of mesenchymal, epithelial and neuroectodermal origin. Like other growth factors, FGFs act by binding and activating specific cell surface receptors. These include the Flg receptor (FGFR-1), the Bek receptor (FGFR-2), FGFR-3, FGFR-4, FGFR-5 and FGFR-6. These receptors usually contain an extracellular ligand-binding region containing three immunoglobulin-like domains, a transmembrane domain and a cytoplasmic tyrosine kinase domain. The gene encoding human Flg maps to chromosome 8p11.23 and is alternatively spliced to produce several isoforms. Mutations in Flg are associated with Pfeiffer syndrome (a skeletal disorder characterized by craniosynostosis with deviation and enlargement of the thumbs and great toes), brachymesophalangy with phalangeal ankylosis and a varying degree of soft tissue syndactyly. The Flg gene is also involved in chromosomal translocations with ZNF198, CEP110 and FOP, which may lead to stem cell leukemia lymphoma (SCLL).

CHROMOSOMAL LOCATION

Genetic locus: FGFR1 (human) mapping to 8p11.23; Fgfr1 (mouse) mapping to 8 A2.

SOURCE

Flg (H-76) is a rabbit polyclonal antibody raised against amino acids 22-97 of Flg 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.

APPLICATIONS

Flg (H-76) is recommended for detection of Flg 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Flg (H-76) is also recommended for detection of Flg in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Flg siRNA (h): sc-29316, Flg siRNA (m): sc-29317, Flg siRNA (r): sc-61890, Flg shRNA Plasmid (h): sc-29316-SH, Flg shRNA Plasmid (m): sc-29317-SH, Flg shRNA Plasmid (r): sc-61890-SH, Flg shRNA (h) Lentiviral Particles: sc-29316-V, Flg shRNA (m) Lentiviral Particles: sc-29317-V and Flg shRNA (r) Lentiviral Particles: sc-61890-V.

Molecular Weight (predicted) of Flg multiple isoforms: 7-92 kDa.

Molecular Weight (observed) of Flg isoforms: 48-140 kDa.

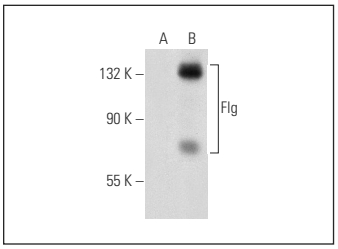
STORAGE

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

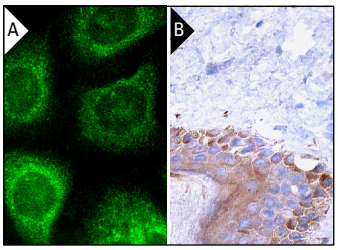
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Flg (H-76): sc-7945. Western blot analysis of Flg expression in non-transfected: sc-117752 (**A**) and human Flg transfected: sc-113615 (**B**) 293T whole cell lysates.



Flg (H-76): sc-7945. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells (**B**).

SELECT PRODUCT CITATIONS

1. Akimov, S.S., et al. 2000. Tissue transglutaminase is an integrin-binding adhesion coreceptor for fibronectin. J. Cell Biol. 148: 825-838.
2. Faraone, D., et al. 2006. Heterodimerization of FGF-receptor 1 and PDGF-receptor-α: a novel mechanism underlying the inhibitory effect of PDGF-BB on FGF-2 in human cells. Blood 107: 1896-1902.
3. Loeb, C.R., et al. 2006. Granzyme B proteolyzes receptors important to proliferation and survival, tipping the balance toward apoptosis. J. Biol. Chem. 281: 28326-28335.
4. Björklund, P., et al. 2008. Type I membrane klotho expression is decreased and inversely correlated to serum calcium in primary hyperparathyroidism. J. Clin. Endocrinol. Metab. 93: 4152-4157.
5. Chen, P.Y., et al. 2009. FRS2 via fibroblast growth factor receptor 1 is required for platelet-derived growth factor receptor β-mediated regulation of vascular smooth muscle marker gene expression. J. Biol. Chem. 284: 15980-15992.
6. Kumata, C., et al. 2010. Involvement of α-Klotho and fibroblast growth factor receptor in the development of secondary hyperparathyroidism. Am. J. Nephrol. 31: 230-238.
7. Martin, A., et al. 2011. Bone proteins PHEX and DMP1 regulate fibroblastic growth factor Fgf23 expression in osteocytes through a common pathway involving FGF receptor (FGFR) signaling. FASEB J. 25: 2551-2562.
8. de Kreuk, B.J., et al. 2011. The F-BAR domain protein PACSIN2 associates with Rac1 and regulates cell spreading and migration. J. Cell Sci. 124: 2375-2388.