SANTA CRUZ BIOTECHNOLOGY, INC.

p-Flg (Tyr 766h)-R: sc-16309-R

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 neuro-ectodermal origin. Like other growth factors, FGFs act by binding and activating specific cell surface receptors. A total of four members of the FGF receptor family have been identified and cloned. These include the Flg receptor or FGFR-1, the Bek receptor or FGFR-2, FGFR-3 and FGFR-4. Each of these receptors consists of an extracellular ligand binding region containing three immunoglobulin-like domains, a transmembrane domain and a cytoplasmic tyrosine kinase domain. In addition to multiple receptors for the FGF family, variant forms of Flg and Bek have been described that probably arise from alternative splicing, thereby increasing the complexity of the FGF receptor family. The binding of FGF to Flg leads to the autophosphorylation of several tyrosine residues on Flg, including Tyr 766. Proper phosphorylation of Tyr 766 is essential for interaction with PLC γ and subsequently, phosphatidylinositol hydrolysis and the release of calcium from internal stores.

REFERENCES

1. Moscatelli, D., et al. 1987. Mr 25,000 heparin-binding protein from guinea pig brain is a high molecular weight form of basic fibroblast growth factor. Proc. Natl. Acad. Sci. USA 84: 5778-5782.
2. Rifkin, D.B., et al. 1989. Recent developments in the cell biology of fibroblast growth factor. J. Cell Biol. 109: 1-6.
3. Dionne, C.A., et al. 1990. Cloning and expression of two distinct high-affinity receptors cross-reacting with acidic and basic fibroblast growth factors. EMBO J. 9: 2685-2692.
4. Keegan, K., et al. 1991. Isolation of an additional member of the fibroblast growth factor receptor family, FGFR-3. Proc. Natl. Acad. Sci. USA 88: 1095-1099.
5. Holtrich, U., et al. 1991. Two additional protein-tyrosine kinases expressed in human lung: fourth member of the fibroblast growth factor receptor family and an intracellular protein-tyrosine kinase. Proc. Natl. Acad. Sci. USA 88: 10411-10415.
6. Mohammadi, M., et al. 1991. A tyrosine-phosphorylated carboxy-terminal peptide of the fibroblast growth factor receptor (Flg) is a binding site for the SH2 domain of phospholipase C-g1. Mol. Cell. Biol. 11: 5068-5078.

CHROMOSOMAL LOCATION

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

SOURCE

p-Flg (Tyr 766h)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr-766 phosphorylated Flg of human origin.

STORAGE

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

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-16309 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Flg (Tyr 766h)-R is recommended for detection of Tyr 766 phosphorylated Flg of mouse, rat, human and *Xenopus laevis*, zebrafish 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 (start-ing dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-Flg (Tyr 766h)-R is also recommended for detection of correspondingly phosphorylated Flg in additional species, including equine, canine, bovine, porcine and avian.

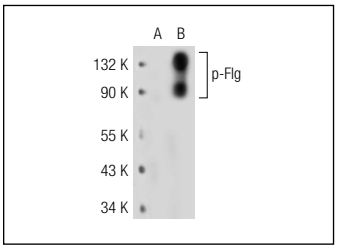
Suitable for use as control antibody for Flg siRNA (h): sc-29316, Flg siRNA (m): sc-29317, Flg shRNA Plasmid (h): sc-29316-SH, Flg shRNA Plasmid (m): sc-29317-SH, Flg shRNA (h) Lentiviral Particles: sc-29316-V and Flg shRNA (m) Lentiviral Particles: sc-29317-V.

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

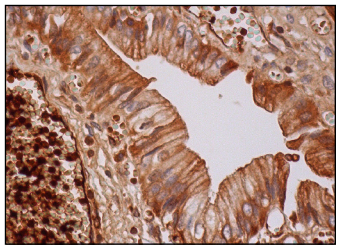
Molecular Weight (observed) of p-Flg isoforms: 48-140 kDa.

Positive Controls: Flg (h): 293T Lysate: sc-113615, U-87 MG cell lysate: sc-2411 or K-562 whole cell lysate: sc-2203.

DATA



p-Flg (Tyr 766h)-R: sc-16309-R. Western blot analysis of phosphorylated Flg expression in non-transfected: sc-117752 (**A**) and human Flg transfected: sc-113615 (**B**) 293T whole cell lysates.



p-Flg Antibody (Tyr 766h)-R: sc-16309-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells.

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.