

p-Flg (Tyr 766m): sc-12935

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

- Moscattelli, D., Joseph-Silverstein, J., Manojas, R. and Rifkin, D.B. 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.
- Rifkin, D.B. and Moscatelli, D. 1989. Recent developments in the cell biology of fibroblast growth factor. *J. Cell. Biol.* 109: 1-6.
- Dionne, C.A., Crumley, G., Bellot, F., Kaplow, J.M., Searfoss, G., Ruta, M., Burgess, W.H., Jaye, M. and Schlessinger, J. 1990. Cloning and expression of two distinct high-affinity receptors cross-reacting with acidic and basic fibroblast growth factors. *EMBO J.* 9: 2685-2692.
- Holtrich, U., Bräuninger, A., Strebhardt, K. and Rübtsamen-Waigmann, H. 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.
- Keegan, K., Johnson, D.E., Williams, L.T. and Hayman, M.J. 1991. Isolation of an additional member of the fibroblast growth factor receptor family, FGFR-3. *Proc. Natl. Acad. Sci. USA* 88: 1095-1099.
- Mohammadi, M., Honegger, A.M., Rotin, D., Fischer, R., Bellot, F., Li, W., Dionne, C.A., Jaye, M., Rubinstein, M. and Schlessinger, J. 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- γ 1. *Mol. Cell Biol.* 11: 5068-5078.

CHROMOSOMAL LOCATION

Genetic locus: FGFR1 (human) mapping to 8p12; Fgfr1 (mouse) mapping to 8 A2.

SOURCE

p-Flg (Tyr 766m) is available as either goat (sc-12935) or rabbit (sc-12935-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Tyr 766 of Flg of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12935 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

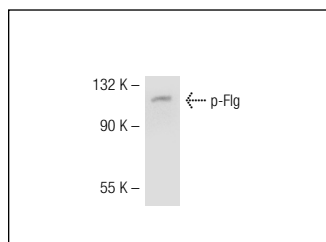
p-Flg (Tyr 766m)-R is recommended for detection of Tyr 766 phosphorylated Flg of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-Flg (Tyr 766m) is also recommended for detection of correspondingly phosphorylated Tyr on 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 of p-Flg: 110 kDa.

DATA



p-Flg (Tyr 766m)-R: sc-12935-R. Western blot analysis of Flg phosphorylation in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

- Liu, J., et al. 2004. Serine-threonine kinases and transcription factors active in signal transduction are detected at high levels of phosphorylation during mitosis in preimplantation embryos and trophoblast stem cells. *Reproduction* 128: 643-654.

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.