

p-Flg (Tyr 653/654)-R: sc-30262-R

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. Proper phosphorylation of Tyr 766 is essential for interaction with PLC γ and subsequently, phosphatidylinositol hydrolysis and the release of calcium from internal stores. Phospho-FGF receptor (Tyr653/654) was detected in embryonic livers only, indicating a physiological role of FGF during early liver development.

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. and Moscatelli, D. 1989. Recent developments in the cell biology of fibroblast growth factor. *J. Cell Biol.* 109: 1-6.

CHROMOSOMAL LOCATION

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

SOURCE

p-Flg (Tyr 653/654)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 653 and Tyr 654 phosphorylated 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-30262-R P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

p-Flg (Tyr 653/654)-R is recommended for detection of dually phosphorylated Tyr 653 and Tyr 654 of 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), 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 653/654)-R is also recommended for detection of correspondingly dually phosphorylated Flg in additional species, including equine, canine, bovine, porcine and avian.

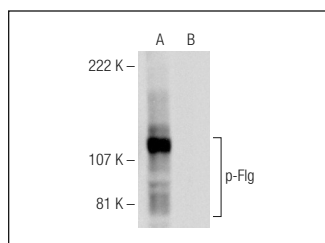
Suitable for use as control antibody for Flg siRNA (h): sc-29316, Flg siRNA (m): sc-29317, Flg shRNA Plasmid (h): sc-29316-SH, Flg shRNA Plasmid (m): sc-29317-SH, Flg shRNA (h) Lentiviral Particles: sc-29316-V and Flg shRNA (m) Lentiviral Particles: sc-29317-V.

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

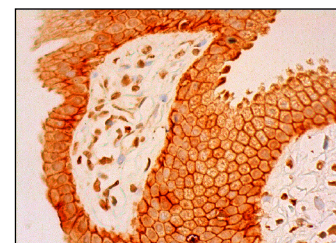
Molecular Weight (observed) of p-Flg isoforms: 48-140 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411 or K-562 whole cell lysate: sc-2203.

DATA



Western blot analysis of Flg phosphorylation in untreated (A) and lambda protein phosphatase (sc-200312A) treated (B) U-87 MG whole cell lysates. Antibody tested include p-Flg (Tyr 653/654)-R: sc-30262-R (A,B).



p-Flg (Tyr 653/654)-R: sc-30262-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane, cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Shiang, C.Y., et al. 2010. Amplification of fibroblast growth factor receptor-1 in breast cancer and the effects of brivanib alaninate. *Breast Cancer Res. Treat.* 123: 747-755.
2. Chen, Z., et al. 2011. Acenaphtho[1,2-b]pyrrole-based selective fibroblast growth factor receptors 1 (FGFR1) inhibitors: design, synthesis, and biological activity. *J. Med. Chem.* 54: 3732-3745.

RESEARCH USE

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