

Flg (h3): 293T Lysate: sc-113615

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., Manejias, 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.
- 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.
- Holtrich, U., Bräuninger, A., Strebhardt, K. and Rübsamen-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.
- 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.
- Mansukhani, A., Dell'Era, P., Moscatelli, D., Kornbluth, S., Hanafusa, H. and Basilico, C. 1992. Characterization of the murine Bek fibroblast growth factor (FGF) receptor: activation by three members of the FGF family and requirement for heparin. *Proc. Natl. Acad. Sci. USA* 89: 3305-3309.
- Sorokin, A., Mohammadi, M., Huang, J. and Schlessinger, J. 1994. Internalization of fibroblast growth factor receptor is inhibited by a point mutation at tyrosine 766. *J. Biol. Chem.* 269: 17056-17061.

CHROMOSOMAL LOCATION

Genetic locus: FGFR1 (human) mapping to 8p11.23.

PRODUCT

Flg (h3): 293T Lysate represents a lysate of human Flg transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Flg (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive Flg antibodies. Recommended use: 10-20 μ l per lane.

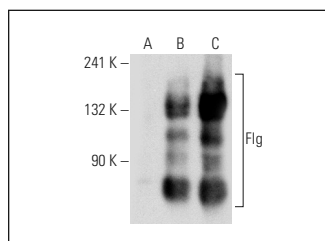
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Flg (M2F12): sc-57132 is recommended as a positive control antibody for Western Blot analysis of enhanced human Flg expression in Flg transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

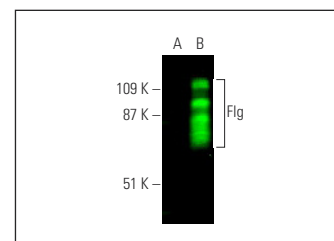
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Flg (M2F12): sc-57132. Western blot analysis of Flg expression in non-transfected: sc-117752 (A), human Flg transfected: sc-113614 (B) and human Flg transfected: sc-113615 (C) 293T whole cell lysates.



Flg (M2F12): sc-57132. Near-infrared western blot analysis of Flg expression in non-transfected: sc-117752 (A) and human Flg transfected: sc-113615 (B) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 680: sc-516180.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.