

Flg (M2F12): sc-57132

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 trans-membrane 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).

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.

CHROMOSOMAL LOCATION

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

SOURCE

Flg (M2F12) is a mouse monoclonal antibody raised against the extracellular domain of Flg isoform α of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Flg (M2F12) is available conjugated to agarose (sc-57132 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-57132 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-57132 PE), fluorescein (sc-57132 FITC), Alexa Fluor® 488 (sc-57132 AF488), Alexa Fluor® 546 (sc-57132 AF546), Alexa Fluor® 594 (sc-57132 AF594) or Alexa Fluor® 647 (sc-57132 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-57132 AF680) or Alexa Fluor® 790 (sc-57132 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

Flg (M2F12) is recommended for detection of Flg isoform α 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

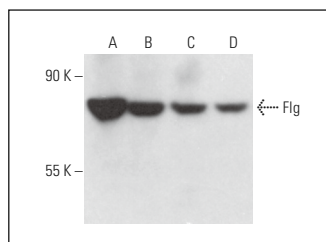
Suitable for use as control antibody for Flg siRNA (h): sc-29316, Flg siRNA (m): sc-29317, Flg siRNA (r): sc-61890, Flg shRNA Plasmid (h): sc-29316-SH, Flg shRNA Plasmid (m): sc-29317-SH, Flg shRNA Plasmid (r): sc-61890-SH, Flg shRNA (h) Lentiviral Particles: sc-29316-V, Flg shRNA (m) Lentiviral Particles: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

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

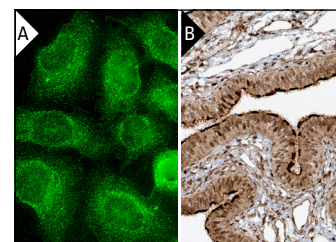
Molecular Weight (observed) of Flg isoforms: 48-140 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, U-87 MG cell lysate: sc-2411 or Neuro-2A whole cell lysate: sc-364185.

DATA



Flg (M2F12): sc-57132. Western blot analysis of Flg expression in PC-12 (A), Neuro-2A (B), U-87 MG (C) and SK-N-SH (D) whole cell lysates.



Flg (M2F12): sc-57132. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing nuclear and cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. Yamaji, S., et al. 2010. A novel fibroblast growth factor-1 (FGF1) mutant that acts as an FGF antagonist. *PLoS ONE* 5: e10273.
2. Hori, A., et al. 2019. Vasculogenic mimicry is associated with trastuzumab resistance of HER2-positive breast cancer. *Breast Cancer Res.* 21: 88.
3. Su, C.C., et al. 2020. Exploring a peptidomimetic approach of N-cadherin in modulating fibroblast growth factor receptor signaling for corneal endothelial regeneration. *FASEB J.* 34: 11698-11713.
4. Olanas, M.C., et al. 2021. Cannabinoid CB1 and CB2 receptors differentially regulate TNF- α -induced apoptosis and LPA1-mediated pro-survival signaling in HT22 hippocampal cells. *Life Sci.* 276: 119407.

STORAGE

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