



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone (800) 325-5832 (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

FGF Receptor 1, Recombinant

Control for Immunoblotting

Product No. F2897

Product Description

FGF Receptor 1 (FGFR-1) is expressed in Human 293T cells transfected with a plasmid encoding FGFR-1. The preparation is provided as whole cell extract in SDS-PAGE sample buffer and is ready-to-use in immunoblotting techniques.

In immunoblotting, the product migrates as a doublet of approximately 110-120 kDa which is detected by a specific antibody to FGFR-1. Other bands may be observed. The specific "doublet" is not recognized by antibodies to FGFR-2 (Bek), FGFR-3 and FGFR-4.

The product may be used as positive control in immunoblotting, when tracing the expression of FGF Receptor-1.

FGF Receptors (FGFR) are members of the tyrosine kinase family of growth factor receptors. They are glycosylated proteins that are composed of an extracellular ligand binding region with typically three immunoglobulin (Ig)-like domains and an eight amino acid "acidic box", a transmembrane region and a cytosolic split tyrosine kinase domain that is activated following ligand binding. At least four high affinity cell surface FGF-Receptors (FGFRs) genes have been identified which are termed FGFR-1 to 4. These genes encode multiple protein isoforms arising by alternative splicing of FGFR-1, FGFR-2 and FGFR-3.¹ FGF Receptors interact with fibroblast growth factors which are members of a large family of closely related polypeptides (MW 17-38 kDa) that are potent physiological regulators of growth and differentiation of a wide variety of cells of mesodermal, ectodermal and endodermal origin.^{1,2,3,4} FGF receptors exhibit overlapping recognition and redundant specificity. One receptor type may bind several of the FGFs with a similar affinity. The ligand

binding site of FGFRs is confined to the extracellular Ig-like domains 2 and 3. Following binding of FGFs to the cellular FGFRs, the bound complex is internalized. Signal transduction by FGFRs require their dimerization and autophosphorylation through their tyrosine kinase domain. FGFR-1 is highly expressed in developing human tissues including the brain (preferentially in neurons), skin and bone growth plates.

Reagents

The extract is provided as approximately 10^7 cells/1ml of RIPA, diluted 1:1 in SDS-PAGE X2 loading buffer.

Precautions

Due to the 2-mercaptoethanol content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Working Conditions

Boil 5-10 μ l of undiluted preparation for 3 minutes prior to loading for each "positive control" gel lane.

In order to obtain best results, we recommend to determine optimal working conditions by titration test.

Storage

Store at -20°C in working aliquots. Repeated freezing and thawing is not recommended.

Reference

1. Givol, D. and Yayon, A. , FASEB . J., **6**, 3362 (1992).

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