Daresbury Proteins

Product description

Name: **Recombinant Human Fibroblast Growth Factor Receptor 1, FGFR1c**

Synonyms: Basic fibroblast growth factor receptor 1 (BFGFR or bFGF-R-1)

Species: Human

Source: HEK293

Amino Acids: 22-375

Tag: 10xHis at the C terminus.

Predicted Molecular Weight: 40.7 kDa

Protein ID: P11362-7

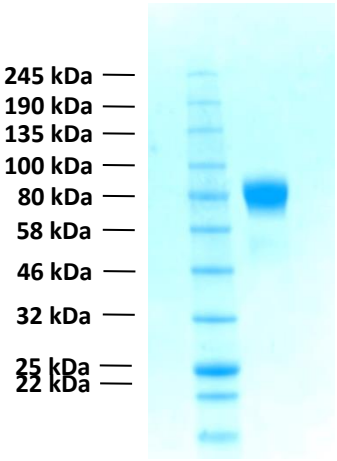
Sequence:

RPSPTLPEQAQPWGAPVEVESFLVHPGDLLQLRCRLRDDVQSINWLRDGVQLAESNRTRITGEEVEVQDSVPADSGLYACVTS
SPSGSDTTYFSVNVSDALPSSEDDDDDDDSSSEEKETDNTKPNPVAPYWTSPEKMEKKLHAVPAAKTVKFKCPSSGTPNPTLR
WLKNGKEFKPDHRIGGYKVRYATWSIIMDSVVPSDKGNYTCIVENEYGSINHTYQLDVVERSPHRPILQAGLPANKTVALGSN
VEFMCKVYSDPQPHIQWLKHIEVNGSKIGPDNLPYVQILKTAGVNTTDKEMEVLHLRNVSFEDAGEYTCLAGNSIGLSHHSAW
LTVLEALEERPAVMTSPLYLEGSGHHHHHHHHHH

Product specifications

Estimated Molecular Weight, SDS-PAGE: ≈80 kDa

Grade & Purity: >95% as estimated by SDS-PAGE stained with Instant Blue Stain (Expedeon).



Endotoxins: Less than 0.1 ng/µg (1 IEU/µg), as measured by LAL method.

Formulation: PBS 20% Glycerol

Shipping

Product is shipped either on dry or wet ice. Upon receipt, store at -20°C to -70°C.

Product application and Storage

Storage: The protein should be stored at -20°C to -70°C preferably in small aliquots to avoid repeated freeze-thaw cycles.

Stability: At least 12 months at -20°C to -70°C and at least 1 month at 2°C to 8°C.

Application Note: For research purposes only. Not for use in humans.

Background Information

It is a single-pass transmembrane protein composed of three extracellular Ig-like domains, a transmembrane region, and a tyrosine kinase domain (1, 2). Tyrosine-protein kinase that acts as cell-surface receptor for fibroblast growth factors and plays an essential role in the regulation of embryonic development, cell proliferation, differentiation and migration (3, 4, 5). Required for normal mesoderm patterning and correct axial organization during embryonic development, normal skeletogenesis and normal development of the gonadotropin-releasing hormone (GnRH) neuronal system (6). Phosphorylates PLCG1, FRS2, GAB1 and SHB (6). Ligand binding leads to the activation of several signalling cascades. Activation of PLCG1 leads to the production of the cellular signalling molecules diacylglycerol and inositol 1,4,5-trisphosphate. Phosphorylation of FRS2 triggers recruitment of GRB2, GAB1, PIK3R1 and SOS1, and mediates activation of RAS, MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signalling pathway, as well as of the AKT1 signalling pathway (7, 8, 9). Promotes phosphorylation of SHC1, STAT1 and PTPN11/SHP2 (10). In the nucleus, enhances RPS6KA1 and CREB1 activity and contributes to the regulation of transcription (11).

FGFR1c is an alternatively spliced isoform representing mesenchymal variant of FGFR1.

References:

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6. Persaud et al. (2011) *EMBO J.*, 3259-3273
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11. Hu et al. (2004) *J. Biol. Chem.*, 29325-29335