



Daresbury Proteins

Product description

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Name: Recombinant Human Fibroblast Growth Factor Receptor 4, FGFR4

Synonyms: Fibroblast Growth Factor Receptor 4 (FGFR4)

Species: Human

Source: HEK293

Amino Acids: 22-369

Tag: 10xHis at the C terminus.

Predicted Molecular Weight: 40.1 kDa

Protein ID: P22455

Sequence:

LEASEEVELEPCLAPSLEQQEQELTVALGQPVRLCCGRAERGGHWYKEGSRLAPAGRVRGWRGRLEIASFLPEDAGRYLCLAR
GSMIVLQNLTLITGDSLTSNDDPKSHRDLNRSYYPQQAPYWTHPQRMEKKLHAVPAGNTVKFRCPAAGNPTPTIRWLKD
GQAFHGENRIGGIRLRHQHWSLVMESVVPDRGTYTCLVENAVGSIRYNYLLDVLESPHRPILQAGLPANTTAVVGSVDVLL
CKVYSDAQPHIQWLKHIVINGSSFGADGFYPVQVLKTADINSSEVEVLYLRNVAEDAGEYTCLAGNSIGLSYQSAWLTVLPE
EDPTWTAAAPARYTDGSGHHHHHHHHHHH

Product specifications

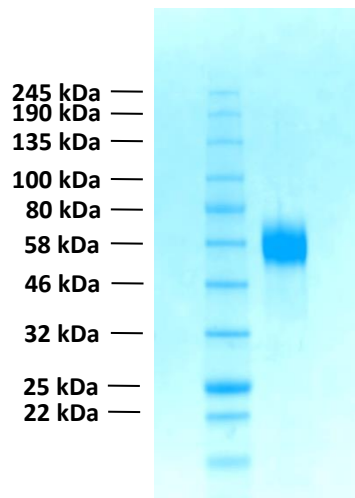
Estimated Molecular Weight, SDS-PAGE: ≈55 kDa

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

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Endotoxins: Less than 0.1 ng/ μ g (1 IEU/ μ g), 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 cell proliferation, differentiation and migration, and in regulation of lipid metabolism, bile acid biosynthesis, glucose uptake, vitamin D metabolism and phosphate homeostasis (3, 4, 5, 6). Required for normal down-regulation of the expression of CYP7A1, the rate-limiting enzyme in bile acid synthesis, in response to FGF19. Phosphorylates PLCG1 and FRS2. Ligand binding leads to the activation of several signalling cascades (6). 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 SRC-dependent phosphorylation of the matrix protease MMP14 and its lysosomal degradation (10). FGFR4 signalling is down-regulated by receptor internalization and degradation; MMP14 promotes internalization and degradation of FGFR4. Mutations that lead to constitutive kinase activation or impair normal FGFR4 inactivation lead to aberrant signalling.

References:

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