

FGFR2 Protein, Human, Recombinant (aa 400-821, His & GST)

General Information

Synonyms:	CFD1;ECT1;K-SAM;BEK;KGFR;CD332;JWS;BFR-1;fibroblast growth factor receptor 2;BBDS;TK14;CEK3;TK25
Protein Construction:	A DNA sequence encoding the human FGFR2 (NP_000132.3) cytoplasmic domain (Met 400-Thr 821) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Gln 26
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P21802-1
Molecular Weight:	75.7 kDa (predicted); 68 kDa (reducing conditions)

QC Testing

Biological Activity:	<ol style="list-style-type: none">1. The specific activity was determined to be 28 nmol/min/mg using Poly(Glu:Tyr) 4:1 as substrate.2. Measured by its binding ability in a functional ELISA. Immobilized recombinant human FGFR2 (aa 400-821) at 10 µg/ml (100 µl/well) can bind biotinylated human FGF acidic with a linear range of 15.6-250 ng/ml.3. Measured by its binding ability in a functional ELISA. Immobilized recombinant human FGFR2 (aa 400-821) at 10 µg/ml (100 µl/well) can bind biotinylated human FGF basic with a linear range of 0.16-1.25 µg/ml.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, pH 7.4, 10% gly.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

FGFR2, also known as CD332, belongs to the fibroblast growth factor receptor subfamily where amino acid sequence is highly conserved between members and throughout evolution. FGFR2 acts as cell-surface receptor for fibroblast growth factors and plays an essential role in the regulation of cell proliferation, differentiation, migration and apoptosis, and in the regulation of embryonic development. It is required for normal embryonic patterning, trophoblast function, limb bud development, lung morphogenesis, osteogenesis and skin development. FGFR2 plays an essential role in the regulation of osteoblast differentiation, proliferation and apoptosis, and is required for normal skeleton development. It also promotes cell proliferation in keratinocytes and immature osteoblasts, but promotes apoptosis in differentiated osteoblasts. FGFR2 signaling is down-regulated by ubiquitination, internalization and degradation. Mutations that lead to constitutive kinase activation or impair normal CD332 maturation, internalization and degradation lead to aberrant signaling. Over-expressed FGFR2 promotes activation of STAT1. Defects in CD332 are the cause of Crouzon syndrome, Jackson-Weiss syndrome, Apert syndrome, Pfeiffer syndrome, Beare-Stevenson cutis gyrata syndrome, familial scaphocephaly syndrome, lacrimo-auriculo-dento-digital syndrome and Antley-Bixler syndrome without genital anomalies or disordered steroidogenesis.

Reference

Marie PJ, et al. (2003) Regulation of human cranial osteoblast phenotype by FGF-2, FGFR-2 and BMP-2 signaling. *Histol.* 17(3):877-85.

Park WJ, et al. (1996) Novel FGFR2 mutations in Crouzon and Jackson-Weiss syndromes show allelic heterogeneity and phenotypic variability. *Hum Mol Genet.* 4(7):1229-33.

Orr-Urtreger A, et al. (1993) Developmental localization of the splicing alternatives of fibroblast growth factor receptor-2 (FGFR2). *Dev Biol.* 158(2):475-86.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481