Bioactive, Rhesus macaque FGFR2 Dimer, His Tag
Product Code: CSP-25294-01
For Research Use Only (RUO)

Protein Name
FGFR2

Alternate Name(s)
FGFR-2, BBDS, BEK, brefeldin A resistance factor 1, BFR-1, cluster of differentiation 332, CD332, CEK3, CFD1, ECT1, JWS, K-SAM, keratinocyte growth factor receptor, KGFR, TK14, TK25, fibroblast growth factor receptor 2

Protein Construct
FGFR2 dimer protein contains a FGFR2 extracellular domain (UniProt# G7N1A1) fused with a dimer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
95 kDa. The migration range of the heterodimer protein with glycosylation under non-reducing condition is ~190 kDa on SDS PAGE.

Shipping Conditions
Frozen Dry Ice

Expression Host
HEK293T

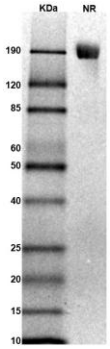
Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Amino Acid Range
R41-E397

Formulation
0.22μm filtered PBS, pH 7.4

Stability & Storage
-80^{0}C

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: FGFR2 dimer under non-reduced condition

The migration range of the heterodimer protein with glycosylation under non-reducing condition is ~190 kDa on SDS PAGE.

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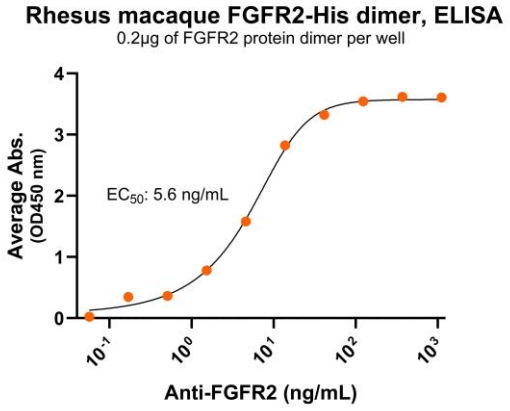
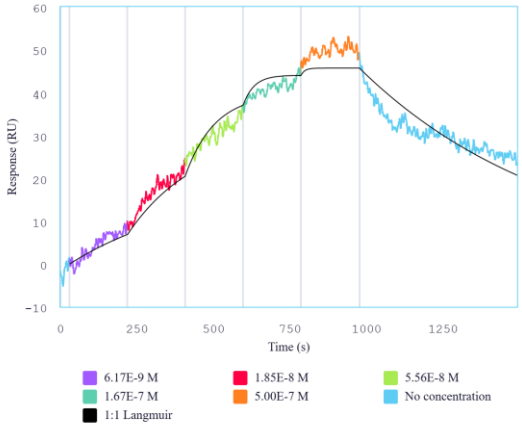
Bioactivity – Antibody Binding



Immobilized Rhesus macaque FGFR2 protein dimer, His tag (Cat. No. CSP-25294-01) can bind anti-human FGFR2 polyclonal antibody with half maximal effective concentration (EC50) range of 2.8-11.2 ng/mL (QC tested).

Bioactivity – SPR



Immobilized Rhesus macaque FGFR2 protein dimer, His tag (Cat. No. CSP-25294-01) can bind human FGF-1 with a KD of 4.8-19.2 nM as determined by LSPR (Nicoya Alto).

Background

Fibroblast growth factor receptor 2 (FGFR2) is a cell surface receptor belonging to the immunoglobulin superfamily and a transmembrane receptor tyrosine kinase that belongs to the FGFR family. FGFR2 is also known as BBDS, BEK, brefeldin A resistance factor 1 (BFR-1), cluster of differentiation 332 (CD332), CEK3, CFD1, ECT1, JWS, K-SAM, keratinocyte growth factor receptor (KGFR), TK14, and TK25. FGFR2, a Type I transmembrane protein, contains an extracellular domain with three immunoglobulin-like (Ig-like) subdomains (D1, D2 and D3), followed by a transmembrane, and an intracellular domain. Dimerization of FGFRs is necessary for activation and they can homodimerize and heterodimerize in both the presence and absence of ligand. FGFRs bind fibroblast growth factors (FGFs) leading to phosphorylation and triggering signaling cascades. Mutations in FGFR2 cause pathological ligand-independent dimerization, leading to uncontrolled signaling in both developmental disorders and cancers. Mutations in the FGFR2 gene are the cause of several craniosynostosis syndromes and FGFR2 is involved in various forms of cancer including gastric cancer, breast cancer and lung cancer. While structurally and functionally similar to human FGFR2 homodimer, Rhesus macaque FGFR2 homodimer is a species-specific tool essential for preclinical studies, basic research, and translational research.