ARG82606
Human FGFR2 ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG82606 Human FGFR2 ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human FGFR2 in serum, plasma and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Specificity	This kit could assay both natural and recombinant Human FGFR2. No significant cross-reactivity or interference was observed in the following samples: Human: IFN gamma, IL1 beta, IL2, IL4, IL5, IL6, IL8, IL10, IL12, IL17A, IL18, IL21, IL22, IL23, MCP1, TGF beta 1, TNF alpha and VEGF. Mouse: GM-CSF, IFN gamma, IL1 beta, IL2, IL4, IL6, IL10, IL17A and TNF alpha. Rat: IFN gamma, IL1 beta, IL4, IL6, IL10 and TNF alpha.
Target Name	FGFR2
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	15.7 pg/ml
Sample Type	Serum, plasma and cell culture supernatants.
Standard Range	31.3 - 2000 pg/ml
Sample Volume	50 µl
Precision	Intra-Assay CV: 5.3% Inter-Assay CV: 6.0%
Alternate Names	CD antigen CD332; BEK; Keratinocyte growth factor receptor; K-SAM; ECT1; FGFR-2; KGFR; JWS; TK14; CFD1; BBDS; TK25; K-sam; CEK3; Fibroblast growth factor receptor 2; EC 2.7.10.1; CD332; BFR-1

Application Instructions

Assay Time	~ 2.5 hours

Properties

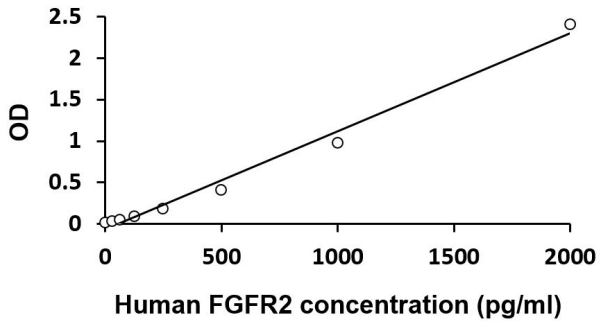
Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	FGFR2

Gene Full Name	fibroblast growth factor receptor 2
Background	The protein encoded by this gene is a member of the fibroblast growth factor receptor family, where amino acid sequence is highly conserved between members and throughout evolution. FGFR family members differ from one another in their ligand affinities and tissue distribution. A full-length representative protein consists of an extracellular region, composed of three immunoglobulin-like domains, a single hydrophobic membrane-spanning segment and a cytoplasmic tyrosine kinase domain. The extracellular portion of the protein interacts with fibroblast growth factors, setting in motion a cascade of downstream signals, ultimately influencing mitogenesis and differentiation. This particular family member is a high-affinity receptor for acidic, basic and/or keratinocyte growth factor, depending on the isoform. Mutations in this gene are associated with Crouzon syndrome, Pfeiffer syndrome, Craniosynostosis, Apert syndrome, Jackson-Weiss syndrome, Beare-Stevenson cutis gyrata syndrome, Saethre-Chotzen syndrome, and syndromic craniosynostosis. Multiple alternatively spliced transcript variants encoding different isoforms have been noted for this gene. [provided by RefSeq, Jan 2009]
Function	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, migration and apoptosis, and in the regulation of embryonic development. Required for normal embryonic patterning, trophoblast function, limb bud development, lung morphogenesis, osteogenesis and skin development. Plays an essential role in the regulation of osteoblast differentiation, proliferation and apoptosis, and is required for normal skeleton development. Promotes cell proliferation in keratinocytes and immature osteoblasts, but promotes apoptosis in differentiated osteoblasts. Phosphorylates PLCG1, FRS2 and PAK4. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling 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 signaling pathway, as well as of the AKT1 signaling pathway. FGFR2 signaling is down-regulated by ubiquitination, internalization and degradation. Mutations that lead to constitutive kinase activation or impair normal FGFR2 maturation, internalization and degradation lead to aberrant signaling. Over-expressed FGFR2 promotes activation of STAT1. [UniProt]
Highlight	Related products: FGFR2 antibodies; FGFR2 ELISA Kits; New ELISA data calculation tool: Simplify the ELISA analysis by GainData
PTM	Autophosphorylated. Binding of FGF family members together with heparan sulfate proteoglycan or heparin promotes receptor dimerization and autophosphorylation on several tyrosine residues. Autophosphorylation occurs in trans between the two FGFR molecules present in the dimer. Phosphorylation at Tyr-769 is essential for interaction with PLCG1. N-glycosylated in the endoplasmic reticulum. The N-glycan chains undergo further maturation to an Endo H-resistant form in the Golgi apparatus. Ubiquitinated. FGFR2 is rapidly ubiquitinated after autophosphorylation, leading to internalization and degradation. Subject to degradation both in lysosomes and by the proteasome. [UniProt]
Cellular Localization	Cell membrane. Golgi apparatus. Cytoplasmic vesicle. Note=Detected on osteoblast plasma membrane lipid rafts. After ligand binding, the activated receptor is rapidly internalized and degraded. Isoform 1: Cell membrane; Single-pass type I membrane protein. Note=After ligand binding, the activated receptor is rapidly internalized and degraded. Isoform 3: Cell membrane. Note=After ligand binding, the activated receptor is rapidly internalized and degraded. Isoform 14 and 19: Secreted. [UniProt]

Images



ARG82606 Human FGFR2 ELISA Kit standard curve image

ARG82606 Human FGFR2 ELISA Kit results of a typical standard run with optical density reading at 450 nm.