

KD-Validated Anti-Fibroblast Growth Factor Receptor 3 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1329

Product Information

Application	WB, FC, ICC
Primary Accession	P22607
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB2965
Calculated MW	87710
Gene Name	FGFR3
Aliases	FGFR3; Fibroblast Growth Factor Receptor 3; JTK4; CD333; CEK2; EC 2.7.10.1; FGFR-3; ACH; Achondroplasia, Thanatophoric Dwarfism; Fibroblast Growth Factor Receptor 3-S; Hydroxyaryl-Protein Kinase; Tyrosine Kinase JTK4; CD333 Antigen; HSGFR3EX; EC 2.7.10
Immunogen	A synthesized peptide derived from human FGFR3

Additional Information

Gene ID	2261
Other Names	Fibroblast growth factor receptor 3, FGFR-3, 2.7.10.1, CD333, FGFR3, JTK4

Protein Information

Name	FGFR3
Synonyms	JTK4
Function	Tyrosine-protein kinase that acts as a cell-surface receptor for fibroblast growth factors and plays an essential role in the regulation of cell proliferation, differentiation and apoptosis. Plays an essential role in the regulation of chondrocyte differentiation, proliferation and apoptosis, and is required for normal skeleton development. Regulates both osteogenesis and postnatal bone mineralization by osteoblasts. Promotes apoptosis in chondrocytes, but can also promote cancer cell proliferation. Required for normal development of the inner ear. Phosphorylates PLCG1, CBL and FRS2. 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. Plays a role in the

regulation of vitamin D metabolism. Mutations that lead to constitutive kinase activation or impair normal FGFR3 maturation, internalization and degradation lead to aberrant signaling. Over-expressed or constitutively activated FGFR3 promotes activation of PTPN11/SHP2, STAT1, STAT5A and STAT5B. Secreted isoform 3 retains its capacity to bind FGF1 and FGF2 and hence may interfere with FGF signaling.

Cellular Location

[Isoform 1]: Cell membrane; Single-pass type I membrane protein. Cytoplasmic vesicle. Endoplasmic reticulum. Note=The activated receptor is rapidly internalized and degraded. Detected in intracellular vesicles after internalization of the autophosphorylated receptor [Isoform 3]: Secreted.

Tissue Location

Expressed in brain, kidney and testis. Very low or no expression in spleen, heart, and muscle. In 20- to 22-week old fetuses it is expressed at high level in kidney, lung, small intestine and brain, and to a lower degree in spleen, liver, and muscle. Isoform 2 is detected in epithelial cells. Isoform 1 is not detected in epithelial cells. Isoform 1 and isoform 2 are detected in fibroblastic cells.

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