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

Rabbit monoclonal antibody
Catalog # AGI1329

Specification

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

Application	**WB, FC, ICC**
Primary Accession	P22607
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 88 kDa; observed, 98 kDa KDa**
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; HSFGFR3EX; EC 2.7.10**
Immunogen	**A synthesized peptide derived from human FGFR3**

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

Gene ID	**2261**

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

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

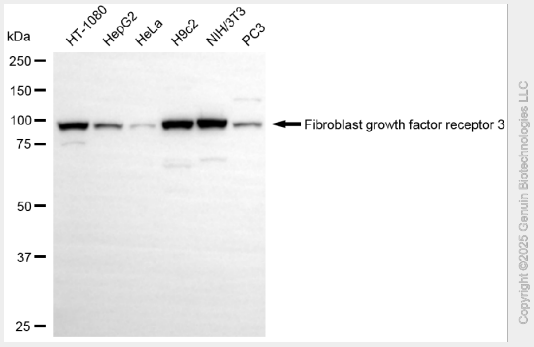
Tissue Location
Expressed in brain, kidney and testis. Very low or no expression in spleen, heart, and muscle. In 20- to 22-week old fetuses it is expressed at high level in kidney, lung, small intestine and brain, and to a lower degree in spleen, liver, and muscle. Isoform 2 is detected in epithelial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

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

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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



Western blotting analysis using anti-fibroblast growth factor receptor 3 antibody (Cat#AGI1329). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-fibroblast growth factor receptor 3 antibody (Cat#AGI1329, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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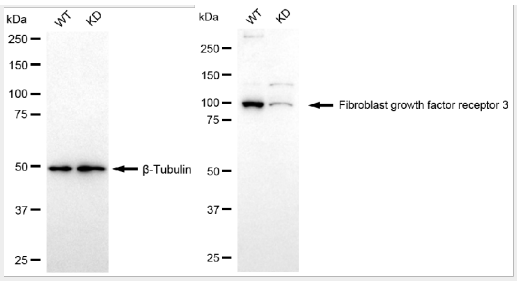
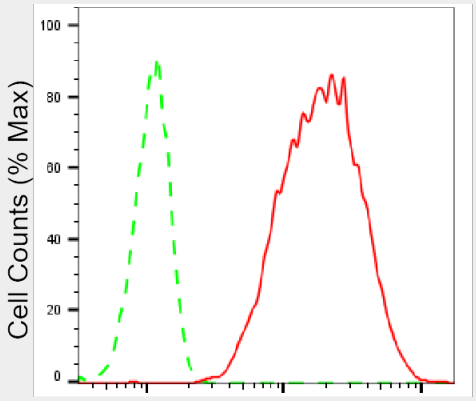
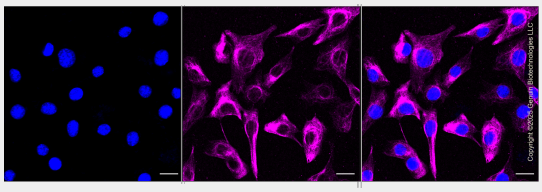


Western blotting analysis using anti-fibroblast growth factor receptor 3 antibody (Cat#AGI1329). Fibroblast growth factor receptor 3 expression in wild-type (WT) and fibroblast growth factor receptor 3 (FGFR3) knockdown (KD) 293T cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-fibroblast growth factor receptor 3 antibody (Cat#AGI1329, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Fibroblast growth factor receptor 3-
Alexa Fluor® 647

Flow cytometric analysis of Fibroblast growth factor receptor 3 expression in C2C12 cells using anti-Fibroblast growth factor receptor 3 antibody (Cat#AGI1329, 1:2,000). Green, isotype control; red, Fibroblast growth factor receptor 3.



Immunocytochemical staining of C2C12 cells with anti-Fibroblast growth factor receptor 3 antibody (Cat#AGI1329, 1:1,000). Nuclei were stained blue with DAPI; Fibroblast growth factor receptor 3 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar, 20 µm.