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FGFR2 Antibody (N-term R22) Blocking Peptide
Synthetic peptide
Catalog # BP7637d

Specification

FGFR2 Antibody (N-term R22) Blocking Peptide - Product Information

Primary Accession P21802

FGFR2 Antibody (N-term R22) Blocking Peptide - Additional Information

Gene ID 2263

Other Names
Fibroblast growth factor receptor 2, FGFR-2, K-sam, KGFR, Keratinocyte growth factor receptor, CD332, FGFR2, BEK, KGFR, KSAM

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7637d was selected from the N-term region of human FGFR2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

FGFR2 Antibody (N-term R22) Blocking Peptide - Protein Information

Name FGFR2

Synonyms BEK, KGFR, KSAM

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, 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.

Cellular Location
Cell membrane; Single-pass type I membrane protein. Golgi apparatus. Cytoplasmic vesicle. Note=Detected on osteoblast plasma membrane lipid rafts. After ligand binding, the activated receptor is rapidly internalized and degraded [Isoform 3]: Cell membrane; Single-pass type I membrane protein. Note=After ligand binding, the activated receptor is rapidly internalized and degraded [Isoform 13]: Secreted.

FGFR2 Antibody (N-term R22) Blocking Peptide - Protocols

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

- Blocking Peptides

FGFR2 Antibody (N-term R22) Blocking Peptide - Images

FGFR2 Antibody (N-term R22) Blocking Peptide - Background

FGFR2 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 the gene for FGFR2 are associated with many craniosynostotic syndromes and bone malformations. The genomic organization of the gene encompasses 20 exons. Alternative splicing in multiple exons, including those encoding the Ig-like domains, the transmembrane region and the carboxyl terminus, results in varied isoforms which differ in structure and specificity. Isoform 1 has equal affinity for aFGF and bFGF but does not bind KGF.

FGFR2 Antibody (N-term R22) Blocking Peptide - References

Freeman, K.W., et al., Cancer Res. 63(19):6237-6243 (2003).Goriely, A., et al., Science 301(5633):643-646 (2003).Fomenkov, A., et al., J. Biol. Chem. 278(26):23906-23914 (2003).Katoh, M., et al., Int. J. Mol. Med. 11(5):579-583 (2003).Katoh, M., et al., Int. J. Oncol. 22(5):1155-1159 (2003).