Revision 1

FGF Receptor 2 Antibody

#3116 Store at -20C

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	145	Rabbit	#P21802	2263

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

FGF Receptor 2 Antibody detects endogenous levels of total FGF receptor 2 protein. It does not cross-react with other FGF receptor family members.

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence around Pro38 of human FGF receptor 2. Antibodies are purified by protein A and peptide affinity chrmatography.

Background

Fibroblast growth factors (FGFs) produce mitogenic and angiogenic effects in target cells by signaling through cell surface receptor tyrosine kinases. There are four members of the FGF receptor family: FGFR1 (flg), FGFR2 (bek, KGFR), FGFR3, and FGFR4. Each receptor contains an extracellular ligand-binding domain, a transmembrane domain, and a cytoplasmic kinase domain (1). Following ligand binding and dimerization, the receptors are phosphorylated at specific tyrosine residues (2). Seven tyrosine residues in the cytoplasmic tail of FGFR1 can be phosphorylated: Tyr463, 583, 585, 653, 654, 730, and 766. Tyr653 and Tyr654 are important for catalytic activity of activated FGFR and are essential for signaling (3). The other phosphorylated tyrosine residues may provide docking sites for downstream signaling components, such as Crk and PLCγ (4,5).

FGFR-2 has several splicing isoforms, with ligand specificity largely determined by alternative splicing of exons 8 (IIIb) and 9 (IIIc). Alternative splicing is cell type specific, resulting in isoforms showing various tissue distribution and biological activities (6,7). Mutations in the corresponding FGFR-2 gene cause syndromes characterized by facial and limb defects, including LADD Syndrome, Crouzon Syndrome, Beare-Stevenson Cutis Grata Syndrome, Pfieffer Syndrome, Apert Syndrome and Jackson-Weiss Syndrome. Mutations and altered expression of FGFR-2 may also be seen in cases of gastric, endometrial and breast cancer (8).

Background References

1. Powers, C.J. et al. (2000) *Endocr Relat Cancer* 7, 165-97.
2. Reilly, J.F. et al. (2000) *J Biol Chem* 275, 7771-8.
3. Mohammadi, M. et al. (1996) *Mol Cell Biol* 16, 977-89.
4. Mohammadi, M. et al. (1991) *Mol Cell Biol* 11, 5068-78.
5. Larsson, H. et al. (1999) *J Biol Chem* 274, 25726-34.
6. Muh, S.J. et al. (2002) *J Biol Chem* 277, 50143-54.
7. Coutts, J.C. and Gallagher, J.T. (1995) *Immunol Cell Biol* 73, 584-9.
8. Eswarakumar, V.P. et al. (2005) *Cytokine Growth Factor Rev* 16, 139-49.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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