

FGF Receptor 2 (D4H9) Rabbit mAb

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100 µl (10 western blots)

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Entrez-Gene ID #2263
UniProt ID #P21802

rev. 06/09/14

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications
W, IP
Endogenous

Species Cross-Reactivity*
H

Molecular Wt.
92, 145 kDa

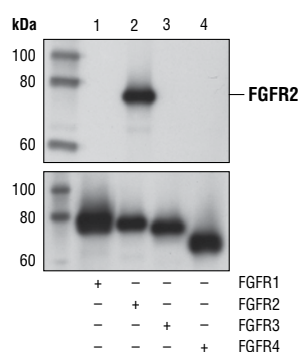
Isotype
Rabbit IgG**

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).

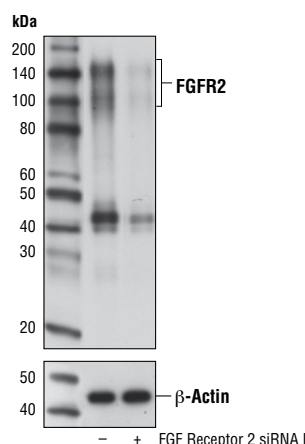
FGFR2 has several splicing isoforms, with ligand specificity largely determined by alternative splicing of exons 8 (IIIb) and 9 (IIIc). Alternative splicing is cell type specific, resulting in isoforms showing various tissue distribution and biological activities (6,7). Research studies have shown that mutations in the corresponding FGFR2 gene cause syndromes characterized by facial and limb defects, including LADD Syndrome, Crouzon Syndrome, Beare-Stevenson Cutis Gyrata Syndrome, Pfeiffer Syndrome, Apert Syndrome, and Jackson-Weiss Syndrome (8-10). Investigators have also observed mutations and altered expression of FGFR2 in cases of gastric, endometrial, and breast cancer (11).

Specificity/Sensitivity: FGF Receptor 2 (D4H9) Rabbit mAb recognizes endogenous levels of total FGF receptor 2 protein. This antibody does not cross-react with other FGF receptor family members.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a recombinant protein corresponding to residues near the carboxy terminal region of human FGF receptor 2 protein.



Western blot analysis of recombinant FGF Receptor 1, FGF Receptor 2, FGF Receptor 3, and FGF Receptor 4, as indicated, using FGF Receptor 2 (D4H9) Rabbit mAb (upper) or FGF Receptor 1 (D8E4) XP® Rabbit mAb #9740 (lane 1), FGF Receptor 2 (D4H9) Rabbit mAb (lane 2), FGF Receptor 3 (C51F2) Rabbit mAb #4574 (lane 3), and FGF Receptor 4 (D3B12) XP® Rabbit mAb #8562 (lane 4) (lower).



Western blot analysis of extracts from KATO III cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-) or SignalSilence® FGF Receptor 2 siRNA I #12600 (+), using FGF Receptor 2 (D4H9) Rabbit mAb (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunoprecipitation 1:50

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) Jefftha, A. et al. (2004) *J Clin Pediatr Dent* 28, 173-6.
- (9) Wilkinson, C.C. et al. (2012) *Childs Nerv Syst* 28, 1221-6.
- (10) Slavotinek, A. et al. (2009) *Am J Med Genet A* 149A, 1814-7.
- (11) Katoh, M. (2009) *J Invest Dermatol* 129, 1861-7.

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

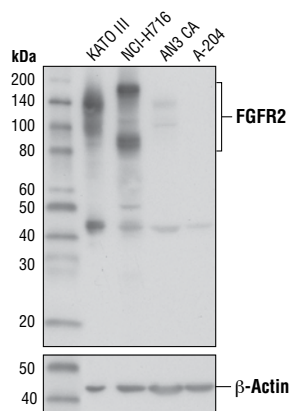
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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected **Species** enclosed in parentheses are predicted to react based on 100% homology.



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Western blot analysis of extracts from various cell lines using FGF Receptor 2 (D4H9) Rabbit mAb (upper) or β -Actin (D6A8) Rabbit mAb #8457 (lower).

