Revision 7

Store at -20C

#23328

FGF Receptor 2 (D4L2V) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

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Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-Bond, IHC-P, IF-IC, FC-FP, FC-L	H M	Endogenous	92,145	Rabbit IgG	#P21802	2263

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
IHC Leica Bond	1:200 - 1:800
Immunohistochemistry (Paraffin)	1:100 - 1:400
Immunofluorescence (Immunocytochemistry)	1:200 - 1:800
Flow Cytometry (Fixed/Permeabilized)	1:100 - 1:400
Flow Cytometry (Live)	1:100 - 1:400

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.

For a carrier free (BSA and azide free) version of this product see product #83546.

Specificity/Sensitivity

FGF Receptor 2 (D4L2V) Rabbit mAb recognizes endogenous levels of total FGFR2 protein and does not cross-react with FGFR1 or FGFR4.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human FGFR2 protein.

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).

Background References

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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. Jeftha, 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.

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 **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

H: Human **M:** Mouse

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Limited Uses