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Store at -20C
#2468

PTCH1 (C53A3) Rabbit mAb

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

Applications: W, IP	Reactivity: H	Sensitivity: Transfected Only	MW (kDa): 180-210	Source/Isotype: Rabbit IgG lambda	UniProt ID: #Q13635	Entrez-Gene Id: 5727
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

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.

Specificity/Sensitivity

PTCH1 (C53A3) Rabbit mAb detects immunoprecipitated or transfected levels of PTCH1.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro1307 of human PTCH1.

Background

Patched1 and 2 (PTCH1 and PTCH2) are twelve-pass transmembrane proteins that function as the receiving receptors for members of the Hedgehog family of proteins (1-4). In the absence of Hedgehog proteins, PTCH suppresses the otherwise constitutively active signaling receptor Smoothened (Smo) so that the Hedgehog signaling pathway is in the off state (5,6). Deactivating mutations that impair the ability of PTCH1 to suppress Smo are frequently found in patients with nevoid basal cell carcinoma syndrome (7,8). PTCH proteins have a sterol-sensing domain (SSD) also found in several proteins that function in cholesterol homeostasis, such as HMGCR (3-hydroxy-3-methylglutaryl coenzyme A-reductase) and SCAP (sterol regulatory element-binding protein-cleavage activating protein). However, the role of the SSD in Patched proteins is not clear (9,10). PTCH1 itself is a target of Hedgehog signaling (11), with elevated PTCH1 expression as a surrogate marker for Hedgehog pathway activation (12-14).

Background References

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7. Hahn, H. et al. (1996) *Cell* 85, 841-851.
8. Johnson, R.L. et al. (1996) *Science* 272, 1668-1671.
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11. Agren, M. et al. (2004) *Gene* 330, 101-114.
12. Watkins, D.N. et al. (2003) *Nature* 422, 313-317.
13. Berman, D.M. et al. (2003) *Nature* 425, 846-851.
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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

Cross-Reactivity Key

H: Human

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