

PI3 Kinase p110 γ (D55D5) Rabbit mAb



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Entrez-Gene ID #5294
Swiss-Prot Acc. #P48736

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, (R)	110 kDa	Rabbit IgG**

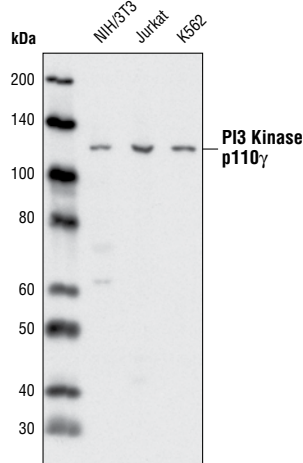
Background: Phosphoinositide 3-kinase (PI3K) catalyzes the production of phosphatidylinositol-3,4,5-triphosphate by phosphorylating phosphatidylinositol (PI), phosphatidylinositol-4-phosphate (PIP) and phosphatidylinositol-4,5-bisphosphate (PIP₂). Growth factors and hormones trigger this phosphorylation event, which in turn coordinates cell growth, cell cycle entry, cell migration and cell survival (1). PTEN reverses this process, and the PI3K signaling pathway is constitutively activated in human cancers that have loss of function of PTEN (2). PI3Ks are composed of a catalytic subunit (p110) and a regulatory subunit. Various isoforms of the catalytic subunit (p110 α , p110 β , p110 γ and p110 δ) have been isolated, and the regulatory subunits that associate with p110 α , p110 β and p110 δ are p85 α and p85 β (3). In contrast, p110 γ associates with a p101 regulatory subunit that is unrelated to p85. Furthermore, p110 γ is activated by $\beta\gamma$ subunits of heterotrimeric G proteins (4).

Specificity/Sensitivity: PI3 Kinase p110 γ (D55D5) Rabbit mAb detects endogenous levels of total PI3 kinase p110 γ protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to human PI3K p110 γ .

Background References:

- (1) Cantley, L.C. (2002) *Science* 296, 1655-7.
- (2) Simpson, L. and Parsons, R. (2001) *Exp Cell Res* 264, 29-41.
- (3) Neri, L.M. et al. (2002) *Biochim Biophys Acta* 1584, 73-80.
- (4) Stoyanov, B. et al. (1995) *Science* 269, 690-3.



Western blot analysis of extracts from NIH/3T3, Jurkat and K562 cells using PI3 Kinase p110 γ (D55D5) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/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

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: 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.