

PI3 Kinase Class II α (D3Q5B) Rabbit mAb



✓ 100 μ l
(10 western blots)

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Entrez-Gene ID #5286
Swiss-Prot Acc. #000443

Applications W, IP Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 180 kDa	Isotype Rabbit IgG**
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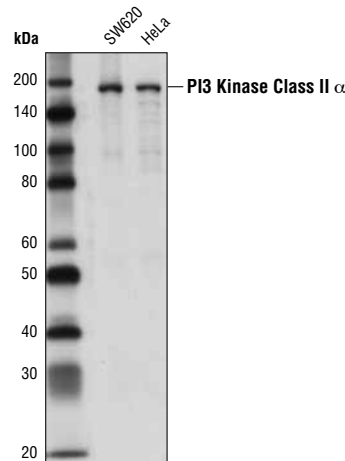
Background: Class II phosphatidylinositol 3-kinases (PI3K) contain a C-terminal C2 domain that is unique to the class II isoforms of the PI3K family. This C2 domain mediates protein and phospholipid binding activities (1,2). PI3K Class II α generates phosphatidylinositol 3-phosphate (PIP3) and phosphatidylinositol 3,4-bisphosphate (PI(3,4)P2) from phosphatidylinositol and phosphatidylinositol 4-phosphate (3). PI3K Class II α is located in various intracellular locations such as the trans-Golgi network, endocytic compartments, clathrin-coated vesicles, and nuclear speckles (1,4,5). Research studies have indicated that PI3K Class II α regulates the assembly and distribution of clathrin, resulting in the modulation of clathrin-dependent trafficking and sorting within the trans Golgi network (5,6). PI3K Class II α also mediates translocation of the glucose transporter GLUT4 to the plasma membrane in response to insulin (7). PI3K Class II α has also been shown to regulate neurosecretory granule exocytosis (8) and vascular smooth muscle contraction (9). Unlike other PI3K family members, PI3K Class II α is less sensitive to the PI3K inhibitors wortmannin and LY294002 (3).

Specificity/Sensitivity: PI3 Kinase Class II α (D3Q5B) Rabbit mAb recognizes endogenous levels of total PI3K class II α protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly717 of human PI3K class II α protein.

Background References:

- (1) Didichenko, S.A. and Thelen, M. (2001) *J Biol Chem* 276, 48135-42.
- (2) Stahelin, R.V. et al. (2006) *J Biol Chem* 281, 39396-406.
- (3) Domin, J. et al. (1997) *Biochem J* 326 (Pt 1), 139-47.
- (4) Domin, J. et al. (2000) *J Biol Chem* 275, 11943-50.
- (5) Gaidarov, I. et al. (2001) *Mol Cell* 7, 443-9.
- (6) Gaidarov, I. et al. (2005) *J Biol Chem* 280, 40766-72.
- (7) Falasca, M. et al. (2007) *J Biol Chem* 282, 28226-36.
- (8) Wen, P.J. et al. (2008) *Mol Biol Cell* 19, 5593-603.
- (9) Yoshioka, K. et al. (2007) *Mol Pharmacol* 71, 912-20.



Western blot analysis of extracts from SW620 and HeLa cells using PI3 Kinase Class II α (D3Q5B) 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.

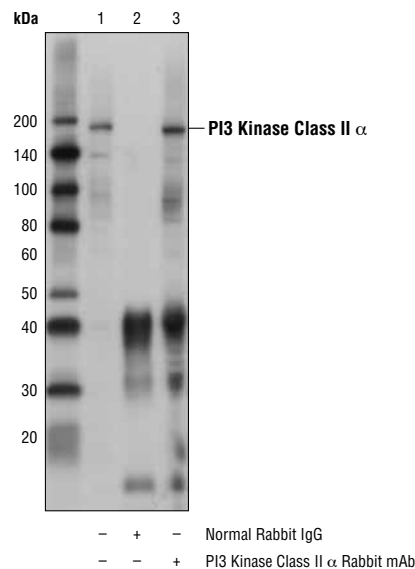
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunoprecipitation 1:50

For product 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 complementary products.



Immunoprecipitation of PI3 Kinase Class II α from HeLa cell extracts, using Normal Rabbit IgG #2729 (lane 2) or PI3 Kinase Class II α Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using PI3 Kinase Class II α (D3Q5B) Rabbit mAb.

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.

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.