

Product Information

Anti-PIP5K3 (N-terminal)

produced in rabbit, affinity isolated antibody

Catalog Number **P0054**

Product Description

Anti-PIP5K3 (N-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the N-terminal of human PIP5K3 (GeneID 200576), conjugated to KLH. The corresponding sequence is identical in human PIP5K3 isoforms 2 and 3 and is highly conserved (single amino acid substitution) in rat and mouse PIP5K3. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-PIP5K3 (N-terminal) specifically recognizes human PIP5K3. The antibody can be used in several immunochemical techniques including immunoblotting. Detection of the PIP5K3 band by immunoblotting is specifically inhibited by the PIP5K3 immunizing peptide.

PIP5K3 (phosphatidylinositol-3-phosphate-5-kinase, type 3, also known as PIKfyve and FAB1) belongs to a large family of lipid kinases that modify the phosphorylation state of phosphatidylinositol (PtdIns). PIP5K3/PIKfyve is a dual specificity kinase that phosphorylates PtdIns(3)P on the 5-OH position to generate PtdIns(3,5)P₂.^{1,2} PIP5K3 has been shown to be localized on early and late endosomes.^{2,3} This characteristic intracellular localization is conferred by the PIP5K3's FYVE finger, a PtdIns(3)P binding module that is a major localization determinant for endosomal membranes enriched in PtdIns(3)P. PIP5K3 enzymatic activity is critical for cell morphology and endocytic membrane homeostasis.⁴ PIP5K3 has been suggested to act as a negative regulator of endosome function or regulating endosome-TGN trafficking.⁵ It negatively regulates exocytosis on neurosecretory cells.⁶ PIP5K3 has also been shown to regulate the trafficking of IRAP/GLUT4 vesicles to plasma membrane in adipocytes, suggesting that it may play a pleiotropic role in membrane trafficking, including the exocytic pathway. PIP5K3 is phosphorylated by protein kinase B (PKB) at Ser³¹⁸ in response to insulin resulting in enhanced translocation of IRAP/GLUT4 vesicles to the plasma membrane.⁷

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 2-4 µg/mL is recommended using HEK-293T cells expressing human PIP5K3.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

References

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5. Rutherford, A.C. et al., *J. Cell Sci.*, **119**, 3944-3957 (2006).
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VS,DS,ER,KAA,TD,PHC,MAM 03/19-1