1-phosphatidylinositol 3-phosphate 5-kinase Antibody

Mouse Monoclonal Antibody [Clone PCRP-PIKFYVE-2B2]

Catalog No	Format	Size
200576-MSM1-P0	Purified Ab with BSA and Azide at 200ug/ml	20 ug
200576-MSM1-P1	Purified Ab with BSA and Azide at 200ug/ml	100 ug
200576-MSM1-P1ABX	Purified Ab WITHOUT BSA or Azide at 1.0mg/ml	100 ug

Applications	Tested Dillution	Note
Flow Cytometry (Flow)	1-2ug/million cells	
Immunofluorescence (IF)	1-3ug/ml	

Product Details

Clone	PCRP-PIKFYVE-2B2
Immunogen	Recombinant human PIKFYVE protein
Host	Mouse
Clonality	Monoclonal
Isotype / Light Chain	IgG1 / Kappa
Mol. Weight of Antigen	237.13kDa
Cellular Localization	Cytoplasmic vesicle, Early endosome membrane, Endosome membrane, Late endosome membrane, Phagosome membrane
Species Reactivity	Human

**Optimal dilution for a specific application should be determined.*

Product Images for 1-phosphatidylinositol 3-phosphate 5-kinase Antibody

Specificity & Comments

Dual specificity kinase implicated in myriad essential cellular processes such as maintenance of endomembrane homeostasis, and endocytic-vacuolar pathway, lysosomal trafficking, nuclear transport, stress- or hormone-induced signaling and cell cycle progression (PubMed:23086417). The PI(3,5)P2 regulatory complex regulates both the synthesis and turnover of phosphatidylinositol 3,5-bisphosphate (PtdIns(3,5)P2). Sole enzyme to catalyze the phosphorylation of phosphatidylinositol 3-phosphate on the fifth hydroxyl of the myo-inositol ring, to form (PtdIns(3,5)P2) (PubMed:17556371). Also catalyzes the phosphorylation of phosphatidylinositol on the fifth hydroxyl of the myo-inositol ring, to form phosphatidylinositol 5-phosphate (PtdIns(5)P) (PubMed:22621786). Has serine-protein kinase activity and is able to autophosphorylate and transphosphorylate. Autophosphorylation inhibits its own phosphatidylinositol 3-phosphate 5-kinase activity, stimulates FIG4 lipid phosphatase activity and down-regulates lipid product formation (PubMed:33098764). Involved in key endosome operations such as fission and fusion in the course of endosomal cargo transport (PubMed:22621786). Required for the maturation of early into late endosomes, phagosomes and lysosomes (PubMed:30612035). Regulates vacuole maturation and nutrient recovery following engulfment of macromolecules, initiates the redistribution of accumulated lysosomal contents back into the endosome network (PubMed:27623384). Critical regulator of the morphology, degradative activity, and protein turnover of the endolysosomal system in macrophages and platelets (By similarity). In neutrophils, critical to perform chemotaxis, generate ROS, and undertake phagosome fusion with lysosomes (PubMed:28779020). Plays a key role in the processing and presentation of antigens by major histocompatibility complex class II (MHC class II) mediated by CTSS (PubMed:30612035). Regulates melanosome biogenesis by controlling the delivery of proteins from the endosomal compartment to the melanosome (PubMed:29584722). Essential for systemic glucose homeostasis, mediates insulin-induced signals for endosome/actin remodeling in the course of GLUT4 translocation/glucose uptake activation (By similarity). Supports microtubule-based endosome-to-trans-Golgi network cargo transport, through association with SPAG9 and RABEPK (By similarity). Mediates EGFR trafficking to the nucleus (PubMed:17909029)., (Microbial infection) Required for cell entry of coronaviruses SARS-CoV and SARS-CoV-2, as well as human coronavirus EMC (HCoV-EMC) by endocytosis.

Supplied As

200ug/ml of Ab purified from Bioreactor Concentrate by Protein G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

Storage and Stability

Antibody with azide - store at 2 to 8 °C. Antibody without azide - store at -20 to -80 °C. Antibody is stable for 24 months. Non-hazardous. No MSDS required.

Limitations and Warranty