

# Echelon Biosciences Inc.

## Mouse Anti-PI(3,4,5)P<sub>3</sub> Antibody

Z-P345b

Support: echelon@echelon-inc.com

### **Description:**

Mouse monoclonal IgG antibody targeting PI(3,4,5)P<sub>3</sub>

### **Applications:**

ELISA - 0.5 ug/mL  
Lipid-Protein Overlay - 4 ug/mL  
IF/ICC - 10 ug/mL  
Flow Cytometry - 0.2 ug/mL  
FP/Alpha Screen - 0.2 ug/mL

Other in vitro and cellular applications are possible using this antibody, but have not been verified by Echelon Biosciences.

### **Properties:**

**Form** - liquid  
**Storage instructions** - Store at 4 °C for up to 30 days. Aliquot and store at -20 or -70 °C if longer storage is necessary. Avoid repeated freeze/thaw cycles.  
**Storage buffer** - PBS, pH 7.4  
**Concentration** - 1.0 mg/mL  
**Purity** - affinity purified  
**Immunogen** - PI(3,4,5)P<sub>3</sub> conjugated to BSA  
**Clonality** - monoclonal  
**Isotype** - IgG1

### **Specificity:**

Z-P345b reacts primarily with the head group of the indicated phosphoinositide and demonstrates low cross-reactivity with other phosphoinositides or phospholipids depending on the assay format.

### **Background:**

Phosphoinositides (PIPns) are minor components of cellular membranes but are integral signaling molecules for cellular communication. Phosphatidylinositol 3,4,5-trisphosphate (PI(3,4,5)P<sub>3</sub>), formed from PI(4,5)P<sub>2</sub> through phosphorylation by PI 3-kinase, activates numerous signaling pathways resulting in cell proliferation, growth, survival, glucose transport and protein synthesis. High PIP<sub>3</sub> levels from dysregulation of PI3-K have been demonstrated in cancer and inflammatory diseases. PI(3,4,5)P<sub>3</sub> is hydrolyzed by the phosphatases PTEN to PI(4,5)P<sub>2</sub> and SHIP to PI(3,4)P<sub>2</sub>.

### **References:**

1. Lin A, Hu Q, Li C, Xing Z, Ma G, Wang C, et al. (2017) The LINK-A lncRNA interacts with PtdIns(3,4,5)P<sub>3</sub> to hyperactivate AKT and confer resistance to AKT inhibitors. *Nat Cell Biol.* 19(3):238-51
2. Sparks RP, Jenkins JL, Miner GE, Wang Y, Guida WC, Sparks CE, et al. (2016) Phosphatidylinositol (3,4,5)-trisphosphate binds to sortilin and competes with neurotensin: Implications for very low density lipoprotein binding. *Biochemical and biophysical research communications.*
3. Noh EM, Park J, Song HR, Kim JM, Lee M, Song HK, et al. (2016) Skin Aging-Dependent Activation of the PI3K Signaling Pathway via Downregulation of PTEN Increases Intracellular ROS in Human Dermal Fibroblasts. *Oxid Med Cell Longev.*

### **Related Products:**

Products	Catalog Number
Assays, Lipids, and Enzymes	
PIPI3 Mass ELISA	K-2500s
PI3-Kinase Activity ELISA	K-1000s
SHIP2 Enzyme	E-1000
Lipids and Antibodies	
PI(3,4,5)P <sub>3</sub>	P-3908, P-3916
Anti-PI(3,4,5)P <sub>3</sub>	Z-A345 (IgM in ascites) Z-B345b (biotinylated IgG) Z-P345 (purified IgM)

Technical Data Sheet Rev. 6, 03-30-21 - For research use only. Not intended or approved for diagnostic or therapeutic



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