Echelon Biosciences Inc.

Mouse Biotinylated Anti-PI(3,4,5)P_3 Antibody

Z-B345b

Support: echelon@echelon-inc.com

Description:
Biotinylated mouse monoclonal IgG antibody against PI(3,4,5)P3

Applications:

ELISA - 1.0 ug/mL
Lipid-Protein Overlay – 1 ug/mL
IF – 5 ug/mL[2]
Flow Cytometry - 5 ug/mL[1]

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 °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 – synthetic PI(3,4,5)P3
Clonality – monoclonal
Isotype - IgG1

Specificity:
Biotin Anti-PI(3,4,5)P3 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)P3), formed from PI(4,5)P2 though phosphorylation by PI 3-kinase, activates numerous signaling pathways resulting in cell proliferation, growth, survival, glucose transport and protein synthesis.

References:

1. Cattley RT, Lee M, Boggess WC, Hawse WF (2020) Transforming growth factor β (TGF-β) receptor signaling regulates kinase networks and phosphatidylinositol metabolism during T-cell activation. Journal of Biological Chemistry.

2. John GB, Gallardo TD, Shirley LJ, Castrillon DH. (2008) Foxo3 is a PI3K-dependent molecular switch controlling the initiation of oocyte growth. Dev Biol. 321(1):197-204.

3. Rose JJ, Foley JF, Yi L, Herren G, Venkatesan S. (2008) Cholesterol is obligatory for polarization and chemotaxis but not for endocytosis and associated signaling from chemoattractant receptors in human neutrophils. J Biomed Sci. 15(4):441-61.

4. Singleton PA, Dudek SM, Chiang ET, Garcia JG. (2005) Regulation of sphingosine 1-phosphate-induced endothelial cytoskeletal rearrangement and barrier enhancement by S1P1 receptor, PI3 kinase, Tiam1/Rac1, and alpha-actinin. Faseb J. 19(12):1646-56.

Related Products:

Products	Catalog Number
Assays and Reagents	
PIP3 Mass ELISA	K-2500s
PI(3,4,5)P3 PolyPIPosomes	Y-P039
PI(3,4,5)P3 Beads	P-B345a
Lipids and Antibodies	
PI(3,4,5)P3	P-3908, P-3916
Anti-PI(3,4,5)P3 (IgM, IgG)	Z-P345, Z-P345b

Echelon Biosciences Inc.
Ph: 866-588-0455
Fax: 801-588-0497
Echelon-inc.com