

Mouse Biotinylated Anti-PI(4,5)P₂ Antibody

Z-B045

Support: echelon@echelon-inc.com

Description:

Biotinylated mouse monoclonal antibody against PI(4,5)P₂

Applications:

ELISA - 2.0 µg/ml
Lipid-Protein overlay – 1.0 µg/mL
IF/ICC – 10 µg/mL
Flow Cytometry - 10 µg/mL¹

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 if longer storage is necessary. Avoid repeated freeze/thaw cycles.
Storage buffer – PBS, pH 7.4
Concentration - Check the label for lot specific information.
Purity – affinity purified
Immunogen – synthetic PI(4,5)P₂ in liposome
Clonality – monoclonal; clone 2C11
Isotype – IgM

Specificity:

Biotin Anti-PI(4,5)P₂ reacts primarily with the head group of the indicated phosphoinositide, and demonstrates low cross-reactivity with other phosphoinositide or phospholipid depending on the assay format.

Background:

Phosphoinositides (PIPns) are minor components of cellular membranes but are integral signaling molecules for cellular communication. Phosphatidylinositol 4,5-bisphosphate (PIP₂) has been shown to play a central role in a variety of cellular functions.

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. Guaytima E, Brandán YR, Favale NO, Santacreu BJ, Sterin-Speziale NB, Márquez MG. (2018) Bradykinin mediates the association of collecting duct cells to form migratory colonies, through B2 receptor activation. *Journal of Cellular Physiology*.
3. Sengelaub CA, Navrazhina K, Ross JB, Halberg N, Tavazoie SF. (2016) PTPRN2 and PLCβ1 promote metastatic breast cancer cell migration through PI (4, 5) P2-dependent actin remodeling. *The EMBO journal*. 35(1):62-76.
4. Marquez, M. G., C. Fernandez-Tome Mdel, et al. (2009). Bradykinin induces formation of vesicle-like structures containing vinculin and PtdIns(4,5)P₂ in renal papillary collecting duct cells. *Am J Physiol Renal Physiol* 297(5): F1181-91.

Related Products:

Products	Catalog Number
Assays and Reagents	
PI(4,5)P ₂ Mass ELISA	K-4500
PI(4,5)P ₂ PIP Beads	P-B045a
PI(4,5)P ₂ PolyPIPosomes	Y-P045
Lipids and Antibodies	
PI(4,5)P ₂	P-4508, P-4516
Anti-PI(4,5)P ₂	Z-P045