

Mouse Anti-PI(4,5)P2 Antibody

Z-P045

Support: echelon@echelon-inc.com

Description:

Mouse monoclonal antibody targeting PI(4,5)P2

Applications:

- ELISA - 0.5 µg/mL
- Lipid-protein overlay – 1.0 µg/mL
- IF/ICC² – 10 µg/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 °C if longer storage is necessary. Avoid repeated freeze/thaw cycles.
- Storage buffer – PBS, pH 7.4
- Concentration – See product label
- Purity – affinity purified using Protein G agarose
- Immunogen – synthetic PI(4,5)P2 in liposome
- Clonality – monoclonal; 2C11
- Isotype - IgM

Specificity:

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.

Data: Immunofluorescence

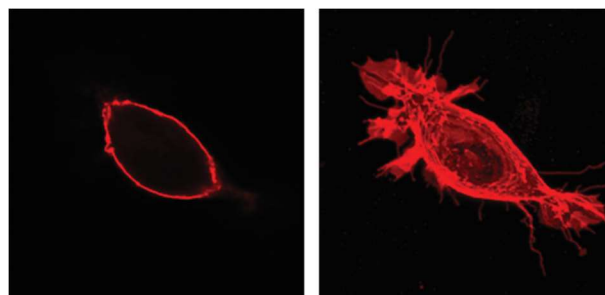


Image adapted with permission, Gerald Hammond. Left: 2D confocal plane, Right: 3D confocal stack

References:

1. Xu Q, Zhang Y, Wei Q, Huang Y, Hu J, Ling K. (2016) Phosphatidylinositol phosphate kinase PIPKI[γ] and phosphatase INPP5E coordinate initiation of ciliogenesis. *Nat Commun.* 7.
2. Dambournet D, Machicoane M, Chesneau L, Sachse M, Rocancourt M, El Marjou A, et al. (2011) Rab35 GTPase and OCRL phosphatase remodel lipids and F-actin for successful cytokinesis. *Nat Cell Biol.* 13(8):981.
3. Hammond GR, Dove SK, Nicol A, Pinxteren JA, Zicha D, Schiavo G. (2006) Elimination of plasma membrane phosphatidylinositol (4,5)-bisphosphate is required for exocytosis from mast cells. *J Cell Sci.* 119(Pt 10):2084-94
4. Thomas CL, Steele J, Prestwich GD, Schiavo G. Generation of phosphatidylinositol-specific antibodies and their characterization. *Biochemical Society Transactions.* 1999;27:648-51.

Related Products:

Products	Catalog Number
Assays and Reagents	
PI(4,5)P2 Mass ELISA	K-4500
PI(4,5)P2 PIP Beads	P-B045a
PI(4,5)P2 PolyPIPosomes	Y-P045
PI(4,5)P2 Binding Protein	G-4501
Lipids and Antibodies	
PI(4,5)P2	P-4508, P-4516
Biotinylated Anti-PI(4,5)P2	Z-B045