

Mouse Anti-PI(4,5)P₂ Antibody, in ascites

Z-A045

Support: echelon@echelon-inc.com

Description:

Mouse monoclonal IgM antibody targeting PI(4,5)P₂ in ascites fluid.

Applications:

ELISA – 1:1000
Lipid-protein overlay – 1:5000
TLC overlay – 1:1000
ICC/IHC – 1:100^{1,3}

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 – 0.01% thiomersal
Concentration – 4.9 mg/mL
Purity – ascites
Immunogen – synthetic PI(4,5)P₂ in liposomes
Clonality – monoclonal; clone 2C11
Isotype – IgM

Specificity:

Anti-PI(4,5)P₂ (ascites) reacts primarily with the head group of the PI(4,5)P₂ phosphoinositide (of synthetic or natural origin) and demonstrates low cross-reactivity with other phosphoinositides or phospholipids depending on the assay format.

Background:

PI(4,5)P₂ is a phospholipid that is enriched in the plasma membrane of cells. It is known to be a substrate of PLC as part of IP₃/DAG signaling, and PI3-kinases in PIP₃ signaling. It is also known to be involved as a regulatory element of membrane trafficking.

Data: Immunofluorescence

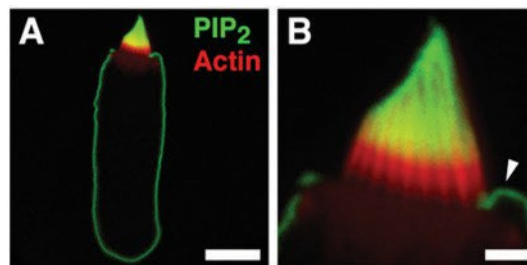


Image adapted with permission from Hirono et al. 2004. PI(4,5)P₂ staining shown in green.

References:

1. Chellaiah, M. A., (2005). Regulation of actin ring formation by rho GTPases in osteoclasts, *J Biol Chem*, 280, 32930.
2. M.J. Hayes, C.J. Merrifield, D. Shao, J. Ayala-Sanmartin, C.D. Schorey, T.P. Levine, J. Proust, J. Curran, M. Bailly and S.E. Moss (2004) Annexin 2 binding to phosphatidylinositol 4,5-bisphosphate on endocytic vesicles is regulated by the stress response pathway. *J Biol Chem*, 279, 14157-64
3. M. Hirono, C.S. Denis, G.P. Richardson and P.G. Gillespie (2004) Hair cells require phosphatidylinositol 4,5-bisphosphate for mechanical transduction and adaptation. *Neuron*, 44, 309-20.
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)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 , IgM	Z-P045, Z-B045, Z-R045, Z-G045