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Technical Data Sheet

For research use only
Not intended or approved for diagnostic or therapeutic use.

Product Name: PI(3,4)P_2 Shuttle PIP™ Kit
Product Number: P-9034

Kit Contents:

Phosphoinositides

Catalog #	Description	Molecular Weight	Quantity
P-3416	PtdIns(3,4)P_2 di-C_{16}	1,080.9	100 µg
C-34F6	BODIPY® FL-PtdIns(3,4)P_2*	1,513.6	50 µg
Carriers			
P-9C1	Neomycin Sulfate	909	50 nmoles
P-9C1R	Neomycin-TMR**	1,326	10 nmoles
P-9C2	Histone H1	~26,230	50 nmoles
P-9C2R	Histone H1-TMR**	~26,730	10 nmoles
P-9C3	Carrier 3	1,551	50 nmoles

Storage and Handling: Certain kit components are moisture and light sensitive. Store unopened kit for up to one year frozen at -20 °C and protected from moisture and light. Reconstitute phosphoinositides and carriers in aqueous buffers or media for use. Reconstituted phosphoinositides and carriers should not be stored at 4 °C for longer than 2-3 days. Samples may be flash frozen and stored at -20 °C for up to three months. Avoid multiple freeze-thaw cycles.

Note: Vortex mixing, brief bath sonication and addition of small amounts of methanol, ethanol, or DMSO may facilitate complete dissolution of phosphoinositides. Phosphate buffers are not recommended and may alter complex formation between carriers and phosphoinositides. *We do not recommend storing carriers and PIPs together as complexes.* On first use, we recommend subdividing carriers into convenient aliquots and storing at -20 °C until the day of use. Working stocks can be stored at 4 °C for 2-3 days.

Selected References:

1. Ozaki, S., DeWald, D. B., Shope, J. C., Chen, J., Prestwich, G. D. (2000) Intracellular delivery of phosphoinositides and inositol phosphates using polyamine carriers. *Proc Natl Acad Sci* U S A **97**, 11286-11291.

2. Weiner, O.D., Neilsen, P.O., Prestwich, G.D., Kirschner, M.W., Cantley, L.C. and Bourne, H.R. (2002). A PtdInsP_3- and Rho GTPase-mediated positive feedback loop regulates neutrophil polarity. *Nat Cell Biol* **4**, 509-512.

3. Larsen, M., Hoffman, M.P., Sakai, T., Neibaur, J.C., Mitchell, J.M., and Yamada, K.M. (2003) Role of PI 3-kinase and PIP3 in submandibular gland branching morphogenesis, *Dev Biol*, **255**, 178-91.

4. Wang, Y. J., Li, W. H., Wang, J., Xu, K., Dong, P., Luo, X., and Yin, H. L. (2004) Critical role of PIP5KI□87 in InsP_3-mediated Ca(2+) signaling, *J Cell Biol*, **167**, 1005.

5. Kanda, H., Tamori, Y., Shinoda, H., Yoshikawa, M., Sakaue, M., Udagawa, J., Otani, H., Tashiro, F., Miyazaki, J., and Kasuga, M. (2005) Adipocytes from Munc18c-null mice show increased sensitivity to insulin-stimulated GLUT4 externalization, *J Clin Invest*, **115,** 291-301.

6. Martin-Belmonte F, Gassama A, Datta A, Yu W, Rescher U, Gerke, V., Mostov, K. (2007) PTEN-Mediated Apical Segregation of Phosphoinositides Controls Epithelial Morphogenesis through Cdc42. *Cell* **128,** 383-397.

7. Leshem Y, Seri L, Levine A., (2007) Induction of phosphatidylinositol 3-kinase-mediated endocytosis by salt stress leads to intracellular production of reactive oxygen species and salt tolerance. *Plant J* **51,**185-197.

*__BODIPY® FL__ has maximal excitation at 505 nm and maximal emission at 513 nm

**__TMR__ = Tetramethylrhodamine (maximal excitation at 555 nm, maximal emission 580 nm)