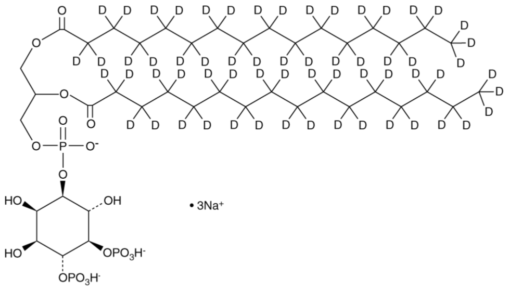
Product Data Sheet

Product Name: PtdIns-(4,5)-P2 (1,2-dipalmitoyl)-d62 (sodium salt)

Cat. No.: GC92090

Chemical Properties

Cas. No.			
Chemical Name	1-(1,2-dihexadecanoyl(2,2',3,3',4,4',5,5',6,6',7,7',8,8',9,9',10,10',11,11',12,12',13,13',14,14',15,16,16,16-d31)phosphatidyl)inositol-4,5-bisphosphate, trisodium salt		
SMILES	O[C@@H]1[C@@H](OP([O-])(O)=O)[C@H](OP([O-])(O)=O)[C@@H](O)[C@@H](O)[C@H]1OP([O-])(OCC(COC(C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])[2H])=O)OC(C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])[2H])=O)=O.[Na+].[Na+].[Na+]		
Formula	$C_{41}H_{16}D_{62}O_{19}P_3$? 3Na	M.Wt	1099.3
Solubility		Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

PtdIns-(4,5)-P_2 (1,2-dipalmitoyl)-d_{62} (sodium salt) is intended for use as an internal standard for the quantification of PtdIns-(4,5)-P_2 (1,2-dipalmitoyl) (sodium salt) by GC- or LC-mass spectrometry. The

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phosphatidylinositol (PtdIns) phosphates represent a small percentage of total membrane phospholipids. However, they play a critical role in the generation and transmission of cellular signals.[1,2] PtdIns-4,5-P_2-(1,2-dipalmitoyl)-d_{62} is a synthetic analog of natural PtdIns containing deuterated C_{16}:0 fatty acids at the *sn*-1 and *sn*-2 positions. This synthetic standard features the same inositol and diacyl glycerol (DAG) stereochemistry as that of the natural compound. The natural compound is the product of phosphatidylinositol 4-phosphate 5-kinase acting on PtdIns-(4)-P_1. Hydrolysis of PtdIns-(4,5)-P_2 by phosphoinositide (PI)-specific phospholipase C generates inositol triphosphate (IP_3) and DAG which are key second messengers in an intricate biochemical signal transduction cascade.

References:

[1]. Exton, J.H.Regulation of phosphoinositide phospholipases by hormones, neurotransmitters, and other agonists linked to G proteinsAnnu. Rev. Pharmacol. Toxicol.36481-509(1996).
[2]. Majerus, P.W.Inositol phosphate biochemistryAnnu. Rev. Biochem.61225-250(1992).

Caution: Product has not been fully validated for medical applications. For research use only.
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