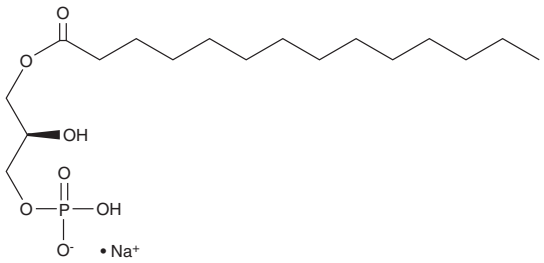
PRODUCT INFORMATION

1-Myristoyl-2-hydroxy-*sn*-glycero-3-phosphate (sodium salt)

Item No. 46312

CAS Registry No.:	325465-45-0
Formal Name:	tetradecanoic acid, 2R-hydroxy-3-(phosphonooxy)propyl ester, monosodium salt
Synonyms:	LPA(14:0), 1-Myristoyl-2-hydroxy Phosphatidic Acid, PA(14:0/0:0), PtdOH-(1-myristoyl, 2-hydroxy), 1-Tetradecanoyl-2-hydroxy-*sn*-glycero-3-phosphate
MF:	$C_{17}H_{34}O_7P \bullet Na$
FW:	404.4
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

1-Myristoyl-2-hydroxy-*sn*-glycero-3-phosphate (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the 1-myristoyl-2-hydroxy-*sn*-glycero-3-phosphate (sodium salt) in the solvent of choice, which should be purged with an inert gas. 1-Myristoyl-2-hydroxy-*sn*-glycero-3-phosphate (sodium salt) is slightly soluble (0.1-1 mg/ml) in chloroform:methanol (2:1).

Description

1-Myristoyl-2-hydroxy-*sn*-glycero-3-phosphate is a lysophospholipid containing myristic acid (Item Nos. 13351 | 45445) at the *sn*-1 position. It is an agonist of lysophosphatidic acid receptor 1 (LPA_1) that increases intracellular calcium mobilization and ERK phosphorylation in human lung fibroblasts (HLFs; EC_{50}s = 54.9 and 190.55 nM, respectively), which highly express the LPA_1 receptor.[1] 1-Myristoyl-2-hydroxy-*sn*-glycero-3-phosphate induces LPA_1 receptor-dependent relaxation of mouse thoracic aorta segments with intact endothelium and constriction of mouse abdominal aorta segments with denuded endothelium at 10 µM.[2]

References

1. Sattikar, A., Dowling, M.R., and Rosethorne, E.M. Endogenous lysophosphatidic acid (LPA_1) receptor agonists demonstrate ligand bias between calcium and ERK signalling pathways in human lung fibroblasts. *Br. J. Pharmacol.* **174(3)**, (2017).
2. Vén, K., Besztercei, B., Janovicz, A., *et al.* LPA-induced thromboxane A2-mediated vasoconstriction is limited to poly-unsaturated molecular species in mouse aortas. *Int. J. Mol. Sci.* **25(13)**, 6872 (2024).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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