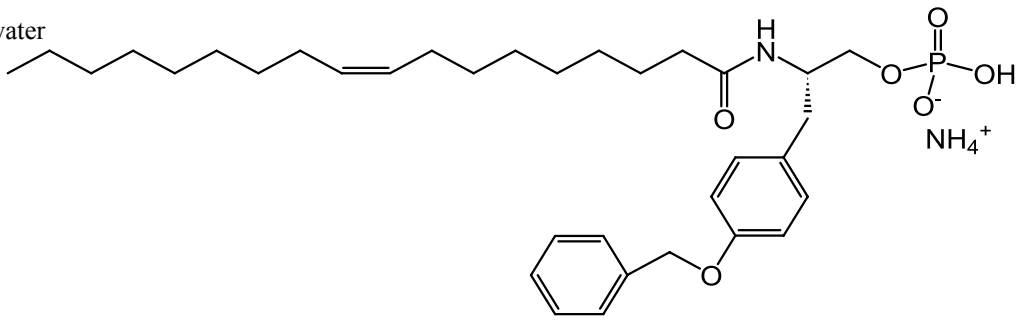
Technical Data Sheet

(S)-Phosphoric acid mono-[3-(4-benzyloxy-phenyl)-2-octadec-9-enoylamino-propyl] ester (ammonium salt) (VPC 12249(S))

Catalog Number	857341	**Physical state**	Powder
Purity	> 99%	**Transition temp.**	No data
CAS	799268-73-8	**CMC**	No data
Synonyms	LPA_1/LPA_3 receptor antagonist; VPC 12249	**pK_a**	No data
Molec. Formula	$C_{34}H_{55}N_2O_6P$	**TLC mobile phase**	C:M:W*, 65:35:8, v/v
MW	618.784	**Exact Mass**	618.380
Percent composition	C 65.99% H 8.96% N 4.53% O 15.51% P 5.01%		
Stability	Store in <-20°C freezer for up to 6 months. Aliquot suspensions (1 mM) and store frozen.		
Solubility	Suspend VPC 12249 in 3% BSA (fatty acid free Bovine Serum Albumin) in water at a lipid concentration of 1 mM.		
Web link	**857341**		

*chloroform:methanol:water



Description:

Lysophospholipids play a role in a broad spectrum of cellular functions, including signal transduction, membrane trafficking and cell growth, migration and survival (Sigal *et al*, 2005). The actions of lysophospholipids, including lysophosphatidic acid (LPA) and sphingosine 1-phosphate (S1P), have been studied through specific interactions with ten G-protein-coupled receptors (LPA_{1-5} and $S1P_{1-5}$) (Skoura and Hla, 2009) and with the nuclear receptor PPAR-γ (peroxisome-proliferator-activated receptor-γ) (Prestwich *et al*, 2005). By defining specific receptor agonists and antagonists, lysophospholipids have been implicated in such diverse pathophysiological states such as cancer, autoimmune diseases, atherosclerosis (Gardell *et al*, 2006; Prestwich *et al*, 2005), immunodeficiency, ischemia–reperfusion injury (Prestwich *et al*, 2005), neuropathic pain and obesity (Gardell *et al*, 2006). Therefore lysophospholipid receptors have emerged as drug targets for therapeutic intervention (Gardell *et al*, 2006).

VPC 12249(S) is a LPA_1 and LPA_3 receptor antagonist.

How to use:

Please use the following web links for **TLC** or **liposome preparation**

References:

• Skoura A, Hla T (2009) Lysophospholipid receptors in vertebrate development, physiology, and pathology. J Lipid Res. 2009 Apr;50 Suppl:S293-8
• Gardell SE, Dubin AE, Chun J (2006) Emerging medicinal roles for lysophospholipid signaling. Trends Molec Med 12(2): 65-75
• Sigal YJ, McDermott MI, Morris AJ (2005) Integral membrane lipid phosphatases/phosphotransferases: common structure and diverse functions. Biochem J 387: 281–293
• Chun, J (2005) Lysophospholipids in the nervous system. Prostaglandins & other Lipid Mediators 77: 46–51
• Prestwich GD *et al* (2005) New metabolically stabilized analogues of lysophosphatidic acid: agonists, antagonists and enzyme inhibitors. Biochem Soc Trans. 33: 1357–1361
• Davis MD *et al* (2005) Spingosine-1-phosphate analogs as receptor antagonists. J Biol Chem 280(11): 9833-9841
• Santos WL *et al* (2004) Synthesis and biological evaluation of phosphonic and thiophosphoric acid derivatives of lysophosphatidic acid. Bioorg Med Chem Lett 14:3473-3476.

Related products: Receptor Agonist/Antagonist

MSDS: Available at www.avantilipids.com for Product Number 857341

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