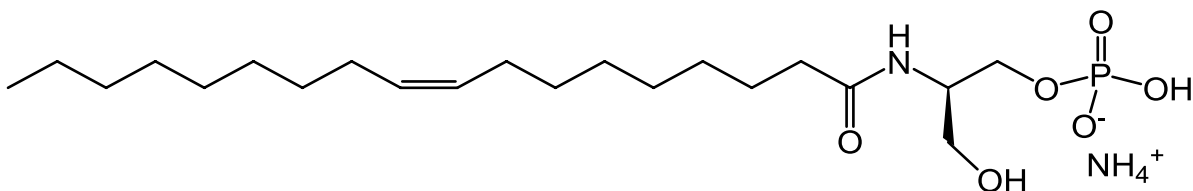


TECHNICAL DATA SHEET

N-{(1R)-2-hydroxy-1-[(phosphonoxy)methyl]ethyl}(9Z)octadec-9-enamide (ammonium salt) (VPC 31143(R))

Catalog Number	857353	Physical state	Powder
Purity	> 99%	Transition temp.	No data
CAS	799268-80-7	CMC	No data
Synonyms	LPA receptor agonist; VPC 31143	pK _a	No data
Molec. Formula	C ₂₁ H ₄₅ N ₂ O ₆ P	TLC mobile phase	C:M:W*, 65:35:8, v/v
MW	452.566	Exact Mass	452.302
Percent composition	C 55.73% H 10.02% N 6.19% O 21.21% P 6.84%		
Stability	Store in <-20°C freezer for up to 6 months. Aliquot suspensions (1 mM) and store frozen.		
Solubility	Suspend VPC 31143 in 3% BSA (fatty acid free Bovine Serum Albumin) in water at a lipid concentration of 1 mM.		
Web link	857353		

*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 (LPA₁₋₅ and S1P₁₋₅) (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 31143 is a LPA receptor agonist.

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 857353

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