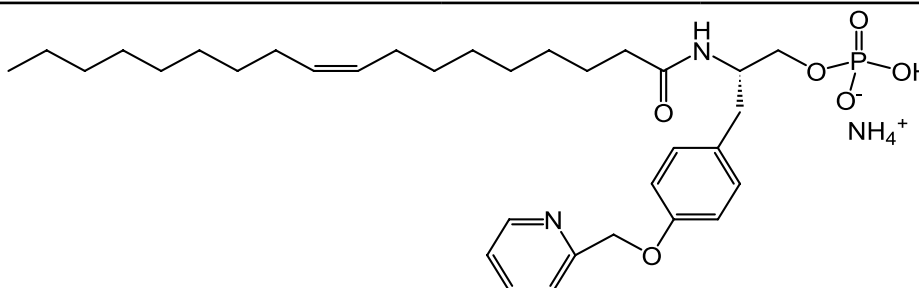


# TECHNICAL DATA SHEET

## (S)-phosphoric acid mono-{2-octadec-9-enoylamino-3-[4-(pyridin-2-ylmethoxy)-phenyl]-propyl} ester (ammonium salt) (VPC 32183(S))

<b>Catalog Number</b>	857340	<b>Physical state</b>	Powder
<b>Purity</b>	> 99%	<b>Transition temp.</b>	No data
<b>CAS</b>	799268-75-0	<b>CMC</b>	No data
<b>Synonyms</b>	LPA <sub>1</sub> /LPA <sub>3</sub> competitive antagonist; VPC 32183	<b>pK<sub>a</sub></b>	No data
<b>Molec. Formula</b>	C <sub>33</sub> H <sub>54</sub> N <sub>3</sub> O <sub>6</sub> P	<b>TLC mobile phase</b>	C:M:W*, 65:35:8, v/v
<b>MW</b>	619.772	<b>Exact Mass</b>	619.375
<b>Percent composition</b>	C 63.95% H 8.78% N 6.78% O 15.49% P 5.00%		
<b>Stability</b>	Store in <-20°C freezer for up to six months. Aliquot suspensions (1 mM) and store frozen.		
<b>Solubility</b>	Suspend VPC 32183 in 3% BSA (fatty acid free Bovine Serum Albumin) in water at a lipid concentration of 1 mM.		
<b>Web link</b>	<a href="#">857340</a>		

\*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<sub>1-5</sub> and S1P<sub>1-5</sub>) (Skoura and Hla, 2009) and with the nuclear receptor PPAR- $\gamma$  (peroxisome-proliferator-activated receptor- $\gamma$ ) (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 32183(S) is a competitive antagonist at the LPA<sub>1</sub> and LPA<sub>3</sub> receptors. VPC 32183 is devoid of agonist activity at the human LPA<sub>1</sub>, LPA<sub>2</sub> and LPA<sub>3</sub> receptors, and, presumably, at other mammalian LPA receptors.

### 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](http://www.avantilipids.com) for Product Number 857340

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