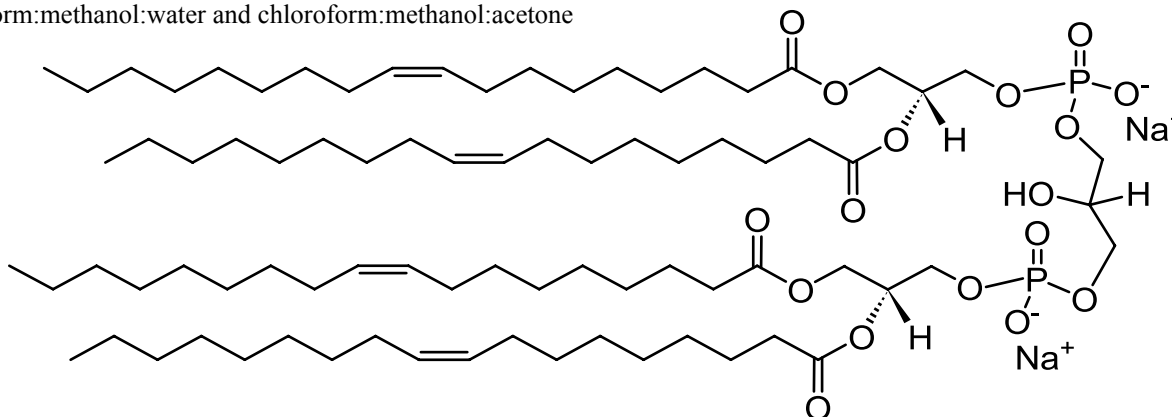


# TECHNICAL DATA SHEET

## 1,1',2,2' Tetraoleoyl Cardiolipin (sodium salt)

<b>Catalog Number</b>	710335	<b>Physical state</b>	Powder; chloroform solution
<b>Purity</b>	> 99%	<b>Transition temp.</b>	No data
<b>CAS</b>	115404-77-8	<b>CMC</b>	No data
<b>Synonyms</b>	18:1 CA	<b>PKA</b>	No data
<b>Molec. Formula</b>	$C_{81}H_{148}O_{17}P_2Na_2$	<b>TLC mobile phase</b>	C:M:W & C:M:A*, 65:25:4, v/v; C:Hexane:M:Acetic Acid 50:30:10:5, v/v, if want to see PG
<b>MW</b>	1,501.000	<b>Exact Mass</b>	1,501.000
<b>Percent composition</b>	C 64.77% H 9.93% O 18.11% P 4.12% Na 3.06%		
<b>Stability</b>	Store in <-20°C freezer for 6 months		
<b>Solubility</b>	Soluble in chloroform and alcohol (warmed with water content 3-5%) at concentrations up to 10 mg/mL. Insoluble in water and acetone.		
<b>Web link</b>	<a href="#">710335</a>		

\* chloroform:methanol:water and chloroform:methanol:acetone



### Description:

Cardiolipin, the mitochondrial-specific phospholipid, helps maintain mitochondrial function, membrane potential and structural support for the inner mitochondrial membrane and the proteins in it (Chicco and Sparagna, 2007). Concentration and composition changes of cardiolipin have been implicated in pathological conditions including ischemia, hypothyroidism, aging, heart failure and cardioskeletal myopathy (Barth syndrome) (Chicco and Sparagna, 2007). Cardiolipin has also been shown as a signaling molecule in apoptosis (Kagan et al, 2006; Ritov et al, 2006).

### Product use:

Soluble in chloroform and alcohol (warmed with water content 3-5%) at concentrations up to 10 mg/mL. Insoluble in water and acetone. Also used in liposomes. Please use the following web link for [liposome preparation](#).

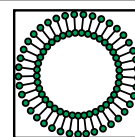
### References:

- Huang and Frohman (2009). Lipid Signaling on the Mitochondrial Surface. *Biochim Biophys Acta*. 2009 Jun 17. [Epub ahead of print].
- Chicco and Sparagna (2007). Role of cardiolipin alterations in mitochondrial dysfunction and disease. *Am J Physiol, Cell Physiol* 292(1): C33-44
- Matsumo et al (2006). Lipid domains in bacterial membranes. *Mol Microbiol* 61(5): 1110-7
- Kagan et al (2006). The "pro-apoptotic genes" get out of mitochondria: oxidative lipidomics and redox activity of cytochrome c/cardiolipin complexes. *Chem Biol Interact* 163(1-2): 15-28
- Ritov et al (2006). Analysis of cardiolipin in human muscle biopsy. *J Chromatogr B* 831:63-71

### Related products: [cardiolipins](#)

**MSDS:** see [www.avantilipids.com](http://www.avantilipids.com) for product number 710335

Avanti Polar Lipids, Inc., 700 Industrial Park Drive, Alabaster, AL 35007-9105, U.S.A.  
Phone • (800) 227-0651 • (205) 663-2494 • Fax (800) 229-1004 • (205) 663-0756  
Email • [orders@avantilipids.com](mailto:orders@avantilipids.com) • Technical Questions: [technical@avantilipids.com](mailto:technical@avantilipids.com)  
• Inquiries: [info@avantilipids.com](mailto:info@avantilipids.com) • Analytical: [analytical@avantilipids.com](mailto:analytical@avantilipids.com)



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