

# PRODUCT INFORMATION



## 1,2-Dioleoyl-3-dimethylammonium-propane

Item No. 25726

CAS Registry No.: 127512-29-2

Formal Name: 9Z-octadecenoic acid,  
1,1'-[1-[(dimethylamino)methyl]-  
1,2-ethanediyl] ester

Synonyms: 18:1 DAP, DODAP

MF:  $C_{41}H_{77}NO_4$

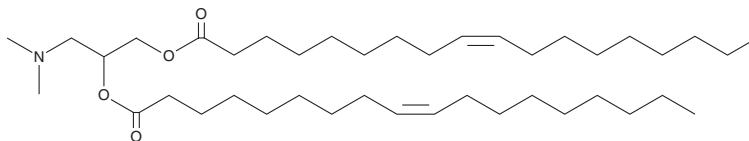
FW: 648.1

Purity:  $\geq 98\%$

Supplied as: An oil

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 2$  years



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

### Laboratory Procedures

1,2-Dioleoyl-3-dimethylammonium-propane (DODAP) is supplied as an oil. A stock solution may be made by dissolving the DODAP in the solvent of choice, which should be purged with an inert gas. DODAP is slightly soluble in chloroform and methanol.

### Description

DODAP is an ionizable cationic lipid ( $pK_a = 5.59$  in a TNS binding assay).<sup>1,2</sup> It has been used as a component in liposomes that can be used to encapsulate siRNA, immunostimulatory oligodeoxynucleotides, antisense oligonucleotides, or chemotherapeutic agents for *in vitro* and *in vivo* delivery.<sup>2-4</sup>

### References

1. Carrasco, M.J., Alishetta, S., Alameh, M.-G., *et al.* Ionization and structural properties of mRNA lipid nanoparticles influence expression in intramuscular and intravascular administration. *Commun. Biol.* **4**(1), 956 (2021).
2. Dabbas, S., Kaushik, R.R., Dandamudi, S., *et al.* Importance of the liposomal cationic lipid content and type in tumor vascular targeting: Physicochemical characterization and *in vitro* studies using human primary and transformed endothelial cells. *Endothelium* **15**(4), 189-201 (2008).
3. Hamzah, J., Altin, J.G., Herringson, T., *et al.* Targeted liposomal delivery of TLR9 ligands activates spontaneous antitumor immunity in an autochthonous cancer model. *J. Immunol.* **183**(2), 1091-1098 (2009).
4. Mendonça, L.S., Firmino, F., Moreira, J.N., *et al.* Transferrin receptor-targeted liposomes encapsulating anti-BCR-ABL siRNA or asODN for chronic myeloid leukemia treatment. *Bioconjug. Chem.* **21**(1), 157-168 (2010).

#### 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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