

Product data sheet



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|---|--|
| MedKoo Cat#: 465240 Name: DODAC CAS: 7212-69-3 (chloride) Chemical Formula: C ₃₈ H ₇₆ ClN Exact Mass: 581.5666 Molecular Weight: 582.483 | |
| Product supplied as: Powder | |
| Purity (by HPLC): ≥ 98% | |
| Shipping conditions: Ambient temperature | |
| Storage conditions: Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks. | |

1. Product description:

DODAC is a cationic lipid for DNA, RNA and vaccine delivery. Cationic lipid, added in monomer or micellar form, bind to DNA, resulting in the formation of a hydrophobic complex. This complex can serve as a well-defined intermediate in the preparation of DNA-lipid particles (DLPs) with many potential applications for delivery of polynucleotides in vitro and in vivo.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

| Solvent | Max Conc. mg/mL | Max Conc. mM |
|---------|-----------------|--------------|
| TBD | TBD | TBD |

4. Stock solution preparation table:

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---------------------------------------|---------|---------|----------|
| 1 mM | 1.72 mL | 8.58 mL | 17.17 mL |
| 5 mM | 0.34 mL | 1.72 mL | 3.43 mL |
| 10 mM | 0.17 mL | 0.86 mL | 1.72 mL |
| 50 mM | 0.03 mL | 0.17 mL | 0.34 mL |

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Luna ACL, Saraiva GKV, Chierice GO, Hesse H, Maria DA. Antiproliferative and proapoptotic effects of DODAC/synthetic phosphoethanolamine on hepatocellular carcinoma cells. *BMC Pharmacol Toxicol.* 2018 Jul 11;19(1):44. doi: 10.1186/s40360-018-0225-2. PMID: 29996919; PMCID: PMC6042440.
2. Luna ACL, Santos Filho JRA, Hesse H, Neto SC, Chierice GO, Maria DA. Modulation of pro-apoptotic effects and mitochondrial potential on B16F10 cells by DODAC/PHO-S liposomes. *BMC Res Notes.* 2018 Feb 14;11(1):126. doi: 10.1186/s13104-018-3170-7. PMID: 29444697; PMCID: PMC5813323.

In vivo study

TBD

7. Bioactivity

Biological target:

DODAC is a cationic lipid for DNA, RNA and vaccine delivery.

In vitro activity

Product data sheet



The treatment with DODAC/PHO-S (0.3 and 2.0 mM) significantly increased the number of necrotic cells, with values of $9.6 \pm 0.14\%$ (0.3 mM) and $12.3 \pm 0.3\%$ (2.0 mM). There was also an increase in late apoptosis, with a percentage of $30.4 \pm 0.4\%$ (0.3 mM) and $31.0 \pm 1.3\%$ (2.0 mM). The treatment with DODAC (0.3 mM) increased the number of necrotic cells to a lesser extent when compared to the other treatments, with a percentage of $6.7 \pm 0.9\%$ (Fig. 2b).

Reference: BMC Pharmacol Toxicol. 2018 Jul 11;19(1):44. <https://pubmed.ncbi.nlm.nih.gov/29996919/>

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.