

# DC68030 | C6mPhE-383

## Instructions for Use

C6mPhE-383 is a top-performing ionizable lipid featuring an aromatic ring and a bio-reducible disulfide bond. Formulated into lipid nanoparticles, it preferentially delivers mRNA to lymphoid tissues (lymph nodes/spleen) while minimizing off-target liver accumulation after intramuscular injection. In a SARS-CoV-2 vaccine study, it elicited strong antibody responses, promoted protective effector memory T cells, and exhibited enhanced safety by significantly reducing systemic inflammatory cytokines compared to the standard SM-102 LNP.

## Product information

|                    |                                                                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAS No.            | Not available                                                                                                                                                       |
| Chemical Name      | C6mPhE-383                                                                                                                                                          |
| Formula            | Not available                                                                                                                                                       |
| M.Wt               | Not available                                                                                                                                                       |
| Purity             | >98%                                                                                                                                                                |
| Storage            | Original product: up to 1 year under the storage conditions stated on the vial, kept tightly sealed. Stock solutions: aliquots at -20°C, generally up to one month. |
| Shipping condition | Ships from Shanghai. Pure lipid is stable during ice-pack transport.                                                                                                |

## Formulation & study context

Literature values apply to the cited study only. Administration routes describe research, not clinical instructions.

A complete product-specific formulation has not been verified. No standard ratio is substituted.

|                      |                                      |
|----------------------|--------------------------------------|
| N/P ratio            | Not reported in the verified record  |
| Cargo                | Not available in the verified record |
| Administration route | Not available in the verified record |
| Animal model         | Not available in the verified record |
| Formulation process  | Not available in the verified record |

N/P is a nitrogen-to-phosphate molar ratio. Lipid:cargo mass ratio is a different quantity and must not be used as N/P.

## Stock-solution preparation table

Calculated using product-page MW: not available g/mol. Volumes are final solution volumes.

| Mass  | 1 mM           | 5 mM           | 10 mM          |
|-------|----------------|----------------|----------------|
| 10 mg | MW unavailable | MW unavailable | MW unavailable |

| Mass   | 1 mM           | 5 mM           | 10 mM          |
|--------|----------------|----------------|----------------|
| 25 mg  | MW unavailable | MW unavailable | MW unavailable |
| 50 mg  | MW unavailable | MW unavailable | MW unavailable |
| 100 mg | MW unavailable | MW unavailable | MW unavailable |
| 250 mg | MW unavailable | MW unavailable | MW unavailable |

Volume (mL) = mass (mg) × 1000 / [MW (g/mol) × concentration (mM)]. Mathematical conversions only; not measured solubility. Confirm solvent compatibility and the exact material before preparation.

## Handling & storage

Provided that storage conditions are as stated on the product vial and the vial is kept tightly sealed, the product can be stored for up to 1 year.

Wherever possible, prepare and use solutions on the same day. If stock solutions must be prepared in advance, store them as aliquots in tightly sealed vials at -20°C. Generally, these will be usable for up to one month.

Before use, and prior to opening the vial, allow the product to equilibrate to room temperature for at least 1 hour.

## References

Not available