

Certificate of Analysis

PHAD®-504

Monophosphoryl Lipid A-504

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Molecular Weight 1735.42

Chemical Formula C₉₄H₁₈₀ N₃O₂₂P

Physical State Powder -20°C

Expiration Date One year from date of receipt

M Lot Number 5087PGC010

Avanti Lot Number 699810P-1MG-C-010

ANALYSIS	SPECIFICATION	RESULTS
Physical examination	Powder : White solid which contains no foreign matter.	Pass
TLC	>99% Purity Ninhydrin: negative Iodine: one major spot Phosphorus: positive Charring: positive Water dip: one major spot	All Pass
HPLC-ELSD	NLT 99% (AUC)	100% (AUC)
Proton NMR	NMR spectrum consistent with structure	Consistent with structure
Phosphorus NMR	NMR spectrum consistent with structure	Consistent with structure
Mass Spectroscopy	[M-NH ₄] ⁻ = 1717.42 ± 1 amu	[M-NH ₄] ⁻ = 1717.8 amu

Approved by:

Kristina See

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