

Certificate of Analysis

Kdo2-Lipid A (KLA)

Di[3-deoxy-D-manno-octulosonyl]-lipid A (ammonium salt)

699500P-1mg Page 1 of 1

Molecular Weight 2306.840

 $\begin{array}{ll} \textbf{Chemical Formula} & C_{110}H_{214}N_6O_{39}P_2 \\ \end{array}$

Physical State Powder Storage -20°C

Expiration Date One year from date of receipt

M Lot Number 5085PGB022

Avanti Lot Number 699500P-1MG-B-022

ANALYSIS	SPECIFICATION	RESULTS
Physical Examination	Powder: White solid which contains no foreign material	Pass
TLC (65:35:8 Chloroform: Methanol: Water)	Ninhydrin: negative lodine: one major spot Phosphorus: positive Charring: positive Water dip: one major spot	All Pass
Proton NMR	NMR spectrum consistent with structure	Consistent with structure
Phosphorus NMR	NMR spectrum consistent with structure	Consistent with structure
HPLC-ELSD	NLT 95% AUC	95.2% (AUC)
Mass Spectroscopy	$[M-4NH_4+H]^{3-} = 745.28 \pm 1$ amu $[M-4NH_4+2H]^{2-} = 1118.2 \pm 1.5$ amu	[M-4NH ₄ +H] ³⁻ = 744.78 amu [M-4NH ₄ +2H] ²⁻ = 1117.66 amu

Approved by:

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