

HEAD/ TAIL	A1	A2	A3	A4	A5	A6	A7	A8	A9	A11	A12	A14	A15	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	A33	A34	A35	A36	A37	
T1							mtRNA						pDNA		mtRNA																				
T2						pDNA	Both		mtRNA		mtRNA	mtRNA	Both																					mtRNA	
T3						Both	Both				mtRNA	mtRNA	Both					mtRNA																	
T4			mtRNA	mtRNA	Both	Both	Both	mtRNA	mtRNA	Both	mtRNA		pDNA					pDNA	pDNA		pDNA	Both	Both	mtRNA										Both	
T5			mtRNA	mtRNA		Both	mtRNA	mtRNA			mtRNA	mtRNA						pDNA	pDNA		Both	pDNA	Both												
T6		mtRNA	mtRNA	pDNA	Both	Both	pDNA		Both									pDNA	pDNA		pDNA	pDNA												pDNA	
T7		pDNA				Both			mtRNA			mtRNA	mtRNA	pDNA	pDNA	pDNA																		Both	
T8													pDNA			pDNA																		Both	
T9						Both												pDNA				Both		mtRNA	mtRNA									Both	
T10							mtRNA																												pDNA
T11																											pDNA								
T12			Both	Both	mtRNA	Both	pDNA	mtRNA	Both		mtRNA	Both	Both	pDNA	Both	Both	Both	mtRNA	mtRNA	mtRNA		mtRNA	Both	mtRNA			Both	pDNA		Both	Both				Both
T13			Both	pDNA	Both	mtRNA	Both		Both				Both		mtRNA			mtRNA	mtRNA			mtRNA	Both	mtRNA	mtRNA		Both								
T14		mtRNA	Both	Both	Both	Both	mtRNA		Both		mtRNA	Both	Both																						
T15			Both	Both	Both	Both	Both	mtRNA	Both		mtRNA	Both	Both		pDNA	Both	Both	Both	Both	Both	mtRNA	mtRNA	Both	Both	Both	Both	Both	Both	Both	Both	Both	Both			

FIG. 1

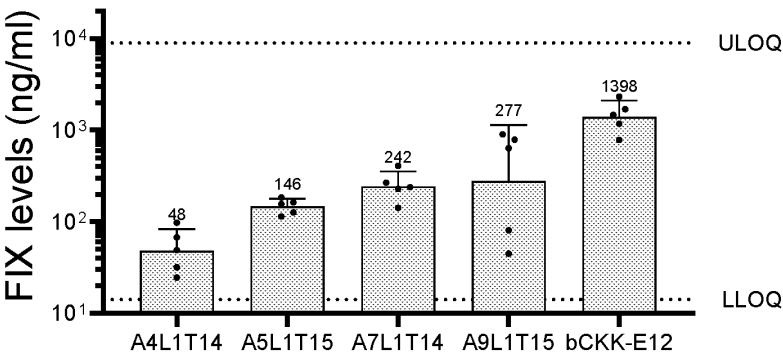


FIG. 2A

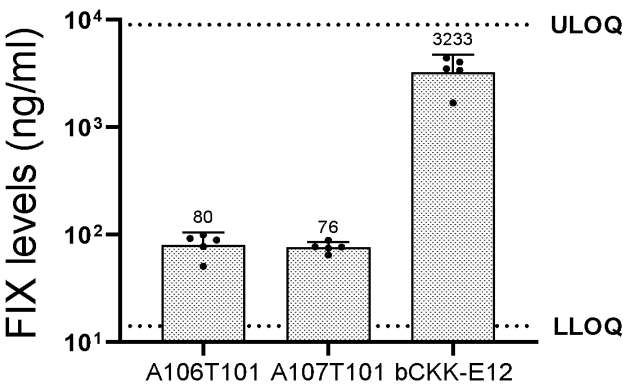


FIG. 2B

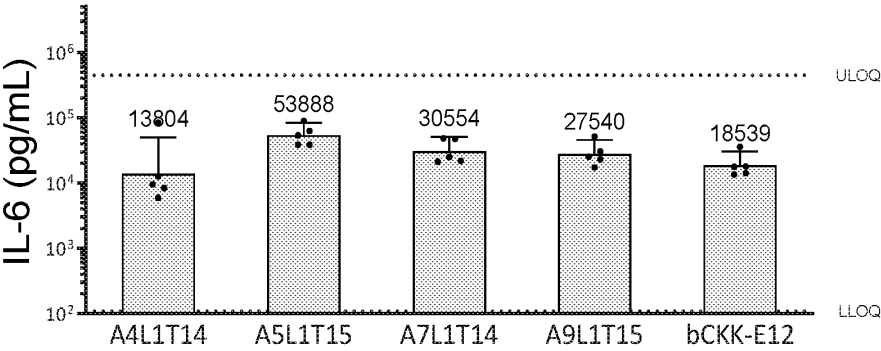


FIG. 2C

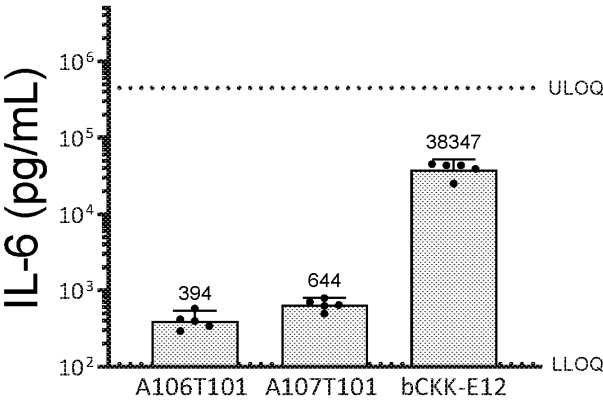


FIG. 2D

LNP	Ionizable Lipid	Molar %	C14-PEG (mol%)	C18-PEG-GalNAc (mol%)	Cholesterol (mol%)	DOPE (mol %)	Mass Ratio	Size	PDI
1788	A4L1T14	35	2.4	0.1	46.5	16	40.9	68	0.09
1790	A4L1T14	35	2.4	0.1	46.5	16	17.5	85	0.04
1791	A4L1T14	35	3.4	0.1	45.5	16	40.9	60	0.09
1792	A4L1T14	35	2.25	0.25	46.5	16	40.9	71	0.08
1793	A4L1T14	35	2.4	0.1	37.5	25	40.9	67	0.08
1794	A4L1T14	18.7	3	0.1	58.1	20	40.9	62	0.13

FIG. 3A

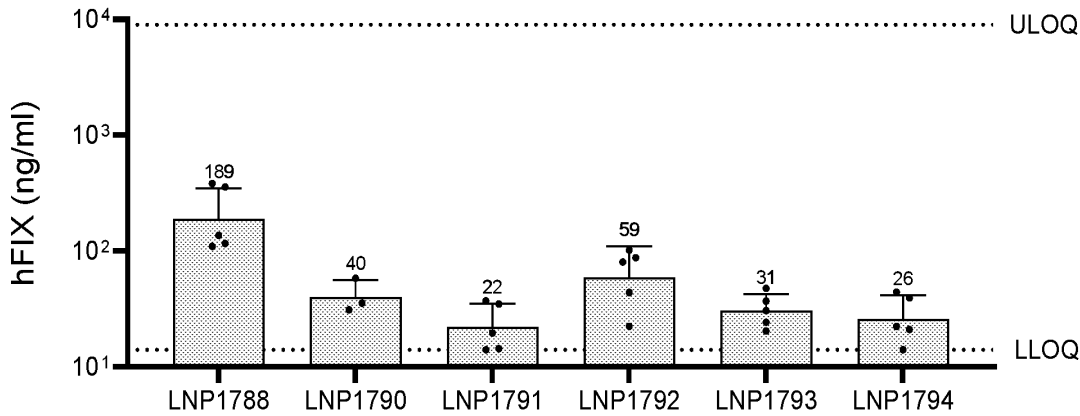


FIG. 3B

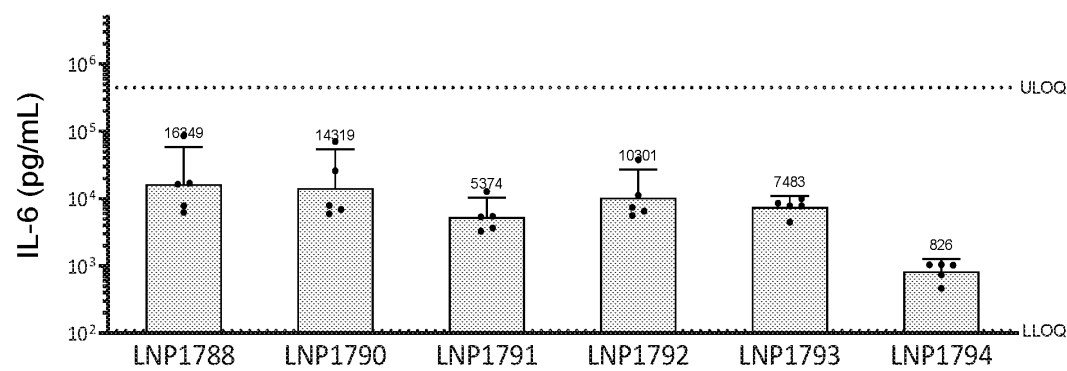


FIG. 3C

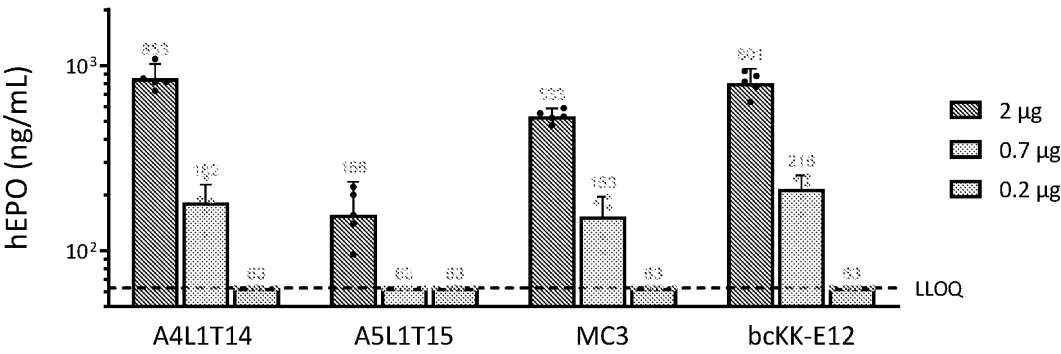


FIG. 4A

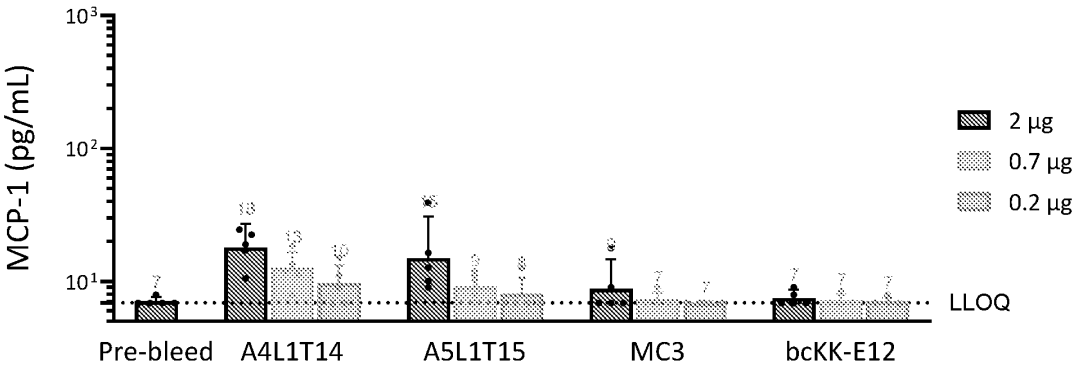


FIG. 4B

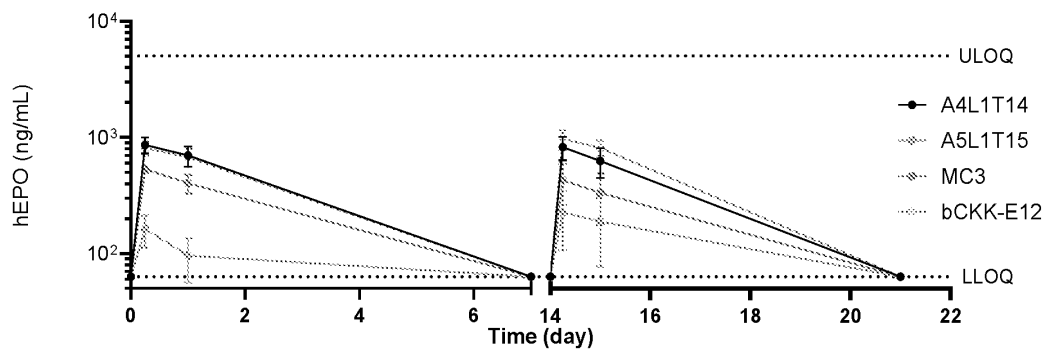


FIG. 4C

LNP	Ionizable Lipid	Molar %	C14-PEG (mol%)	C18-PEG-GalNAc (mol%)	Cholestrol (mol%)	DOPE (mol%)	Mass Ratio
1	A4L1T14	35	2.4	0.1	46.5	16	40.9
2	A4L1T14	35	2.4	0.1	46.5	16	23
3	A4L1T14	35	2.5	0	46.5	16	40.9

FIG. 5A

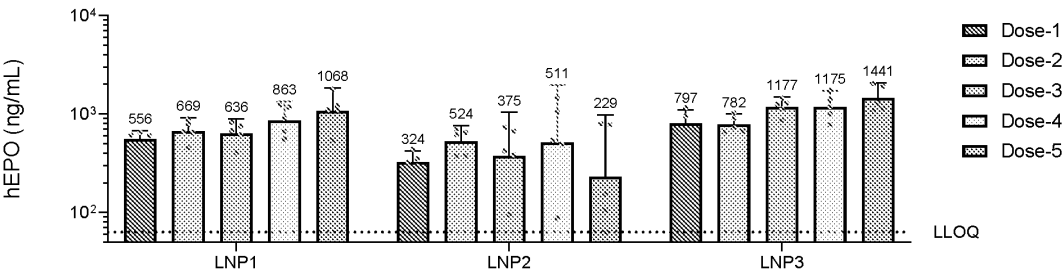


FIG. 5B

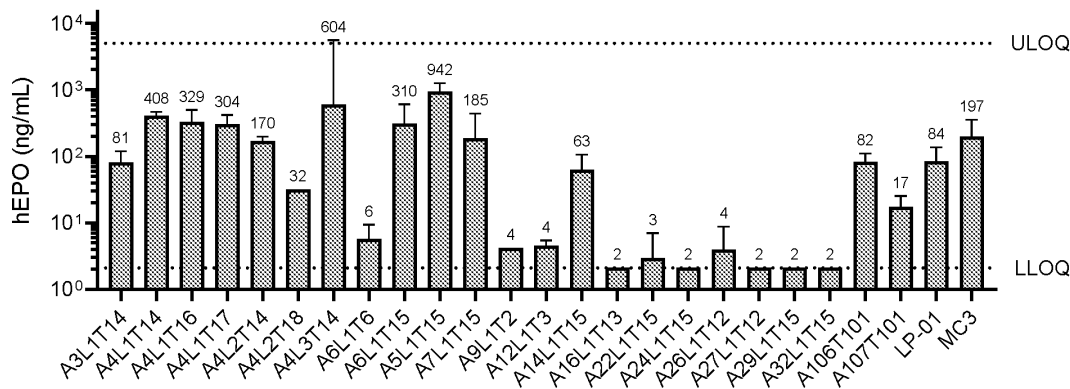


FIG. 6

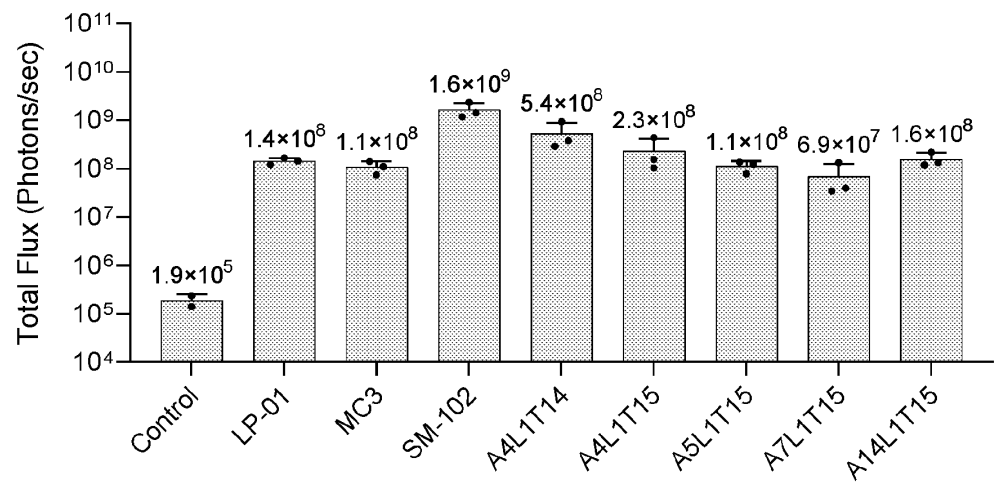


FIG. 7

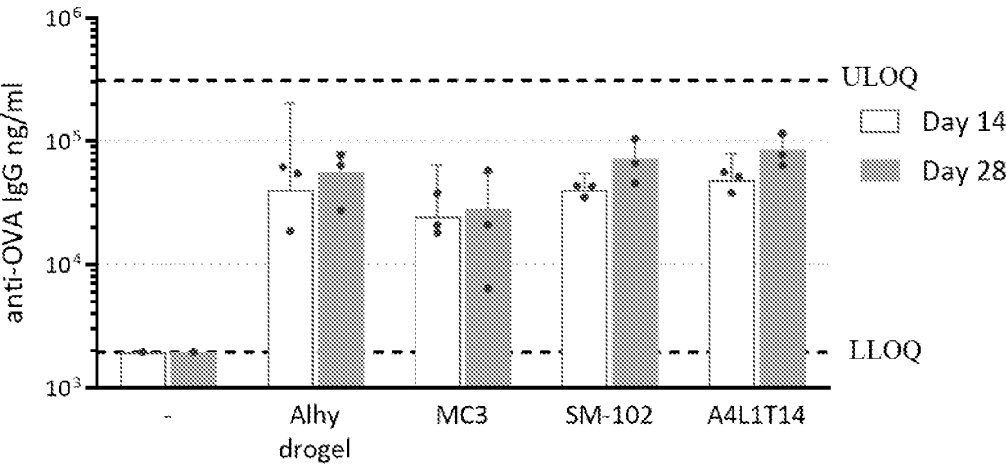


FIG. 8A

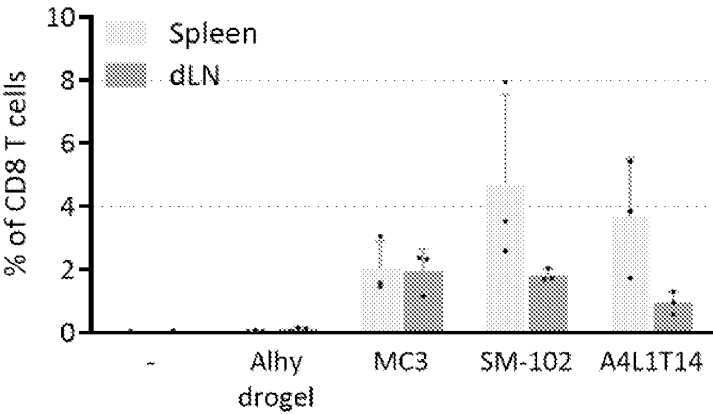


FIG. 8B

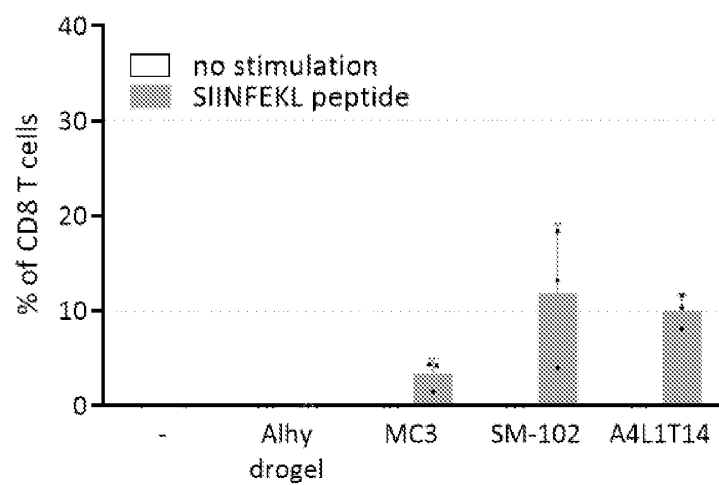


FIG. 8C