

Luka Sequence Alignment

SEQ_ID_NO:1	---	HKSDQDNKK	EHVDK	SQDKK	RNVNTN	KDKNST	APDDIG	KNGKIT	KRTET	VYDEK	TNI	57	CC8	
SEQ_ID_NO:2	---	ANKDSQDQ	TKKEH	VDK	AKQEK	RNVNDK	DKNT	PGDDIG	KNGKIT	KRTV	SEYDEK	TNI	58	CC45
SEQ_ID_NO:27		NSANKDSQDQ	TKKEH	VDK	AKQEK	RNVNDK	DKNT	PGDDIG	KNGKIT	KRTV	SEYDEK	TNI	60	HMPREF0772_044(TCH60)
SEQ_ID_NO:36		NSANKDSQDQ	TKKEH	VDK	AKQEK	RNVNDK	DKNT	PGDDIG	KNGKIT	KRTV	SEYDEK	TNI	60	SAR2108(MRSA252)
SEQ_ID_NO:34		NSANKDSQDQ	TKKEH	VDK	AKQEK	RNVNDK	DKNT	PGDDIG	KNGKIT	KRTV	SEYDEK	TNI	60	SALG_02329(A9635)
SEQ_ID_NO:35		NSANKDSQDQ	TKKEH	VDK	AKQEK	RNVNDK	DKNT	PGDDIG	KNGKIT	KRTET	VYDEK	TNI	60	SAPIG2061(ST398)
SEQ_ID_NO:37		NSANKDSQDQ	TKKEH	VDK	AKQEK	RNVNDK	DKNT	PGDDIG	KNGKIT	KRTET	VYDEK	TNI	60	SATG_01930(D139)
SEQ_ID_NO:26		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	APDDIG	KNGKIT	KRTET	VYDEK	TNI	60	NEWMAN
SEQ_ID_NO:32		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	TPDDIG	KNGKIT	KRTET	VYDEK	TNI	60	SAB1876C(RF122)
SEQ_ID_NO:38		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	TPDDIG	KNGKIT	KRTET	VYDEK	TNI	60	SAV2005(MU50)
SEQ_ID_NO:31		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	TPDDIG	KNGKIT	KRTET	VYDEK	TNI	60	SAL813(N315)
SEQ_ID_NO:33		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	APDDIG	KNGKIT	KRTET	VYDEK	TNI	60	SACOL2006
SEQ_ID_NO:29		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	APDDIG	KNGKIT	KRTET	VYDEK	TNI	60	USA300(TCH959)
SEQ_ID_NO:28		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	TPDDIG	KNGKIT	KRTET	VYDEK	TNI	60	TCH130
SEQ_ID_NO:30		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	TPDDIG	KNGKIT	KRTET	VYDEK	TNI	60	MW1942(MW2)
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SEQ_ID_NO:25		NSAHKDSQDQ	KNKKEH	VDK	SQDKK	RNVNTN	KDKNST	TPDDIG	KNGKIT	KRTET	VYDEK	TNI	60	Majority
		*****	*****	*****	*****	*****	*****	*****	*****	*****	*****			
SEQ_ID_NO:1		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	117
SEQ_ID_NO:2		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	118
SEQ_ID_NO:27		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:36		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:34		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:35		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:37		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:26		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:32		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:38		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:31		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:33		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:29		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:28		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
SEQ_ID_NO:30		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	120
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SEQ_ID_NO:25		LQNLQDFE	FDIDPT	YD	KNVLLV	NKQGS	IHSN	LKFE	SHKKE	KN	SNWL	KYPSE	YH	113
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FIG. 1

Luka Sequence Alignment (Cont.)

SEQ_ID_NO:1	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	177
SEQ_ID_NO:2	PKTEILDQLPKNKISTAKVDS	PFSSYSLGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	178
SEQ_ID_NO:27	PKTEILDQLPKNKISTAKVDS	PFSSYSLGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:36	PKTEILDQLPKNKISTAKVDS	PFSSYSLGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:34	PKTEILDQLPKNKISTAKVDS	PFSSYSLGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:35	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSVNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:37	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSVNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:26	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	179
SEQ_ID_NO:32	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:31	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:33	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:29	PKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	179
SEQ_ID_NO:28	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
SEQ_ID_NO:30	PKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
	*****	*****	*****	
	*****	*****	*****	
SEQ_ID_NO:25	RKTEILDQLPKNKISTAKVDS	PFSSYSSGGKFKEDSTNG	IGRTSSNSYSKTSISYNQNYDTIA	180
	140/141	149	156	
SEQ_ID_NO:1	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	237	
SEQ_ID_NO:2	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	238	
SEQ_ID_NO:27	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:36	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:34	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:35	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:37	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:26	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	239	
SEQ_ID_NO:32	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:31	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:33	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:29	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	239	
SEQ_ID_NO:28	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
SEQ_ID_NO:30	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	
	*****	*****	*****	
	*****	*****	*****	
SEQ_ID_NO:25	SGKNNNHHVHWSV	WANDLKYGGEVKNRNDELLEFYRNTRIATVENPELSEFASKYRYPALVR	240	193

FIG. 1 (Cont.)

LukB Sequence Alignment

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SEQ_ID_NO:15 KINSEIKQVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 CC8
SEQ_ID_NO:16 EIKSKITTVSEKNLDGDTKMYTRTATTSDEKKISQSIQNFELTEPNYDKETVEIKAKGT 60 CC45
SEQ_ID_NO:40 EIKSKITTVSEKNLDGDTKMYTRTATTSDEKKISQSIQNFELTEPNYDKETVEIKAKGT 60 A9635
SEQ_ID_NO:43 EIKSKITTVSEKNLDGDTKMYTRTATTSDEKKISQSIQNFELTEPNYDKETVEIKAKGT 60 E1410
SEQ_ID_NO:45 EIKSKITTVSEKNLDGDTKMYTRTATTSDEKKISQSIQNFELTEPNYDKETVEIKAKGT 60 MSA252
SEQ_ID_NO:42 KINSEIKQVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 D139
SEQ_ID_NO:46 KINSEIKQVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 M1.50
SEQ_ID_NO:44 KINSEIKQVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 JKD6008
SEQ_ID_NO:41 -----DKETVEIKAKGT 12 COL
SEQ_ID_NO:50 KINSEIKQVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 USA300_FPR3757
SEQ_ID_NO:51 KINSEIKQVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 NEWMAN
SEQ_ID_NO:48 KINSEIKAVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 RF122
SEQ_ID_NO:47 KINSEIKAVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 MW2
SEQ_ID_NO:49 KINSEIKQVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60 TCH130
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SEQ_ID_NO:39 KINSEIKQVSEKNLDGDTKMYTRTATTSDSQKNITQSIQNFELTEPNYDKETVEIKAKGT 60
45 53

IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
IGSGLKILNPNFYWNSTLRWPGSYSVSIQNVDDNNNTNVTDFAPKNQDEPREVKYTYGY 120
IGSGLKILNPNFYWNSTLRWPGSYSVSIQNVDDNNNTNVTDFAPKNQDEPREVKYTYGY 120
IGSGLKILNPNFYWNSTLRWPGSYSVSIQNVDDNNNTNVTDFAPKNQDEPREVKYTYGY 120
IGSGLKILNPNFYWNSTLRWPGSYSVSIQNVDDNNNTNVTDFAPKNQDEPREVKYTYGY 120
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 71
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
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IGSGLRLDPNGYWNSTLRWPGSYSVSIQNVDDNN-NTNVTDFAPKNQDEPREVKYTYGY 119
109

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FIG. 2

Luke Sequence Alignment (Cont.)

SEQ_ID_NO:15	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 179
SEQ_ID_NO:16	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 180
SEQ_ID_NO:40	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 180
SEQ_ID_NO:43	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 180
SEQ_ID_NO:45	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 180
SEQ_ID_NO:46	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 179
SEQ_ID_NO:47	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 179
SEQ_ID_NO:49	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 179
SEQ_ID_NO:39	KTGGDFSIINRGGLTGNITKESNYSETISYQQPSYRLLDQSTSHKGVGWKVEAHLINNMG 179
SEQ_ID_NO:15	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 239
SEQ_ID_NO:16	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 240
SEQ_ID_NO:40	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 240
SEQ_ID_NO:43	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 240
SEQ_ID_NO:45	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 239
SEQ_ID_NO:46	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 239
SEQ_ID_NO:47	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 191
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SEQ_ID_NO:48	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 239
SEQ_ID_NO:47	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 239
SEQ_ID_NO:49	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 239
SEQ_ID_NO:39	HDHTRQQLTNDSDNRTKSEIFSLTRNGNLWAKDNFTPKDKMPVTVSEGFNPEELAVMSHDK 239

FIG. 2 (Cont.)

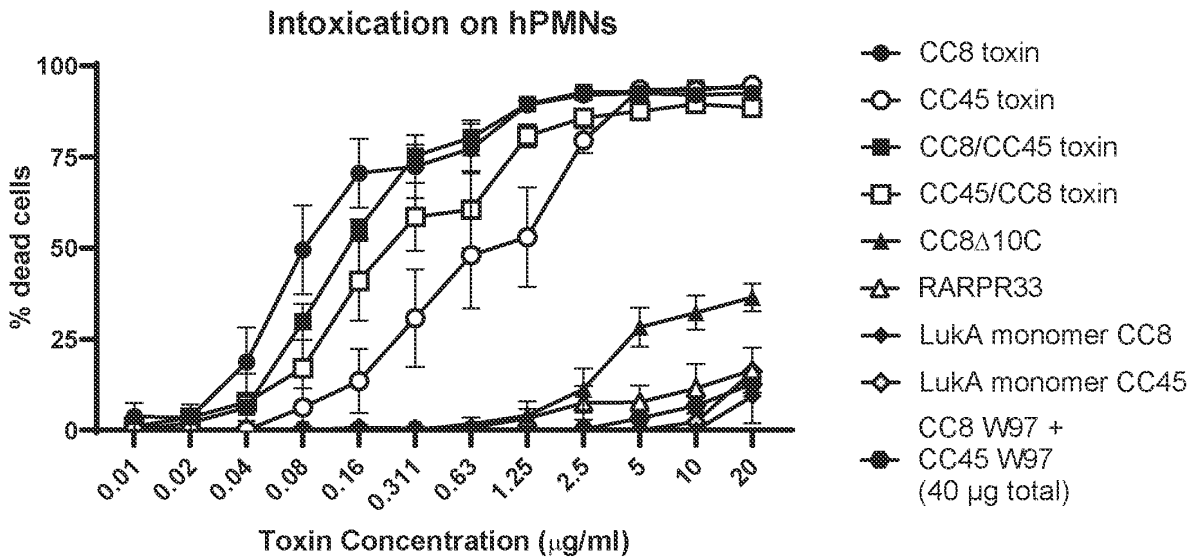


FIG. 3

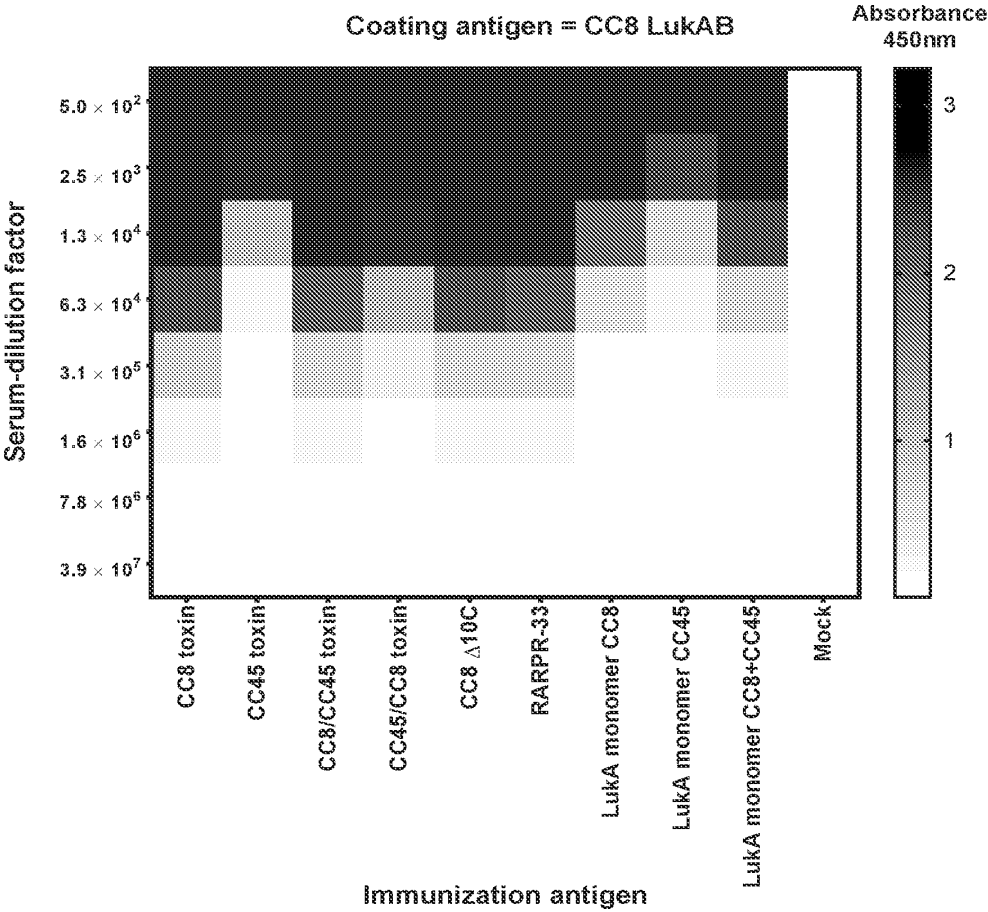


FIG. 4A

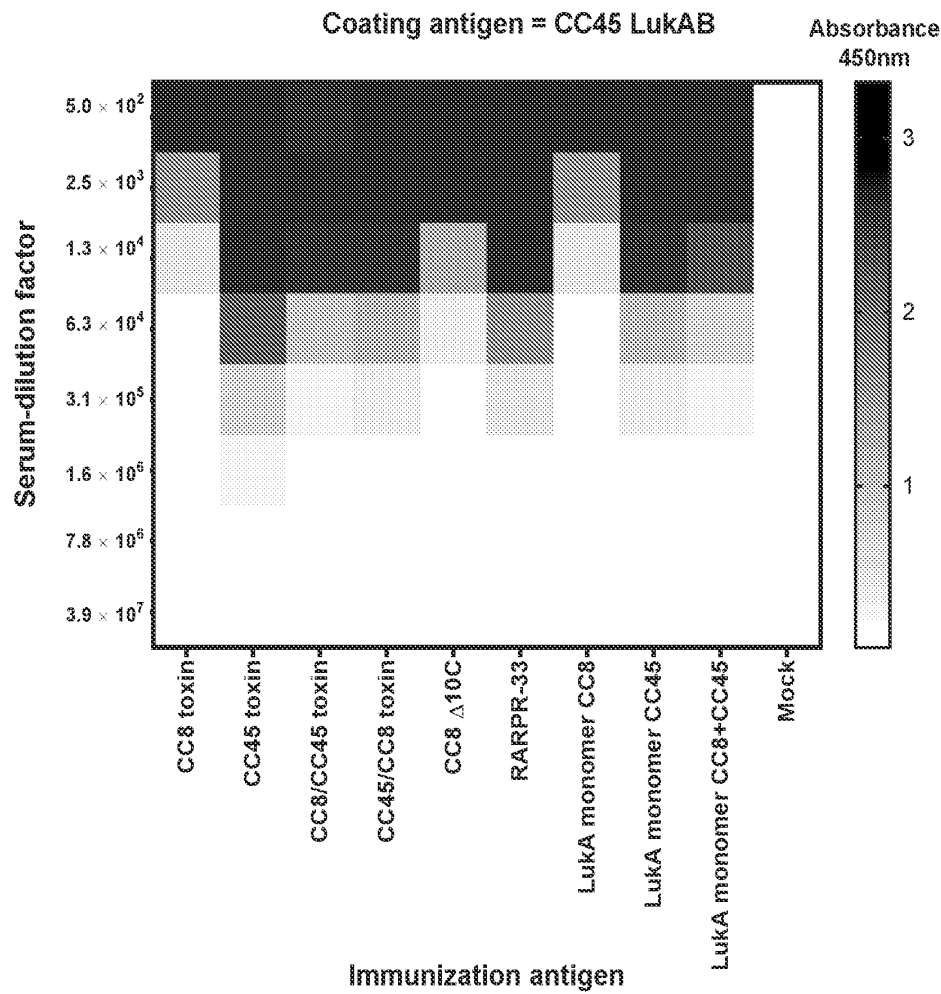
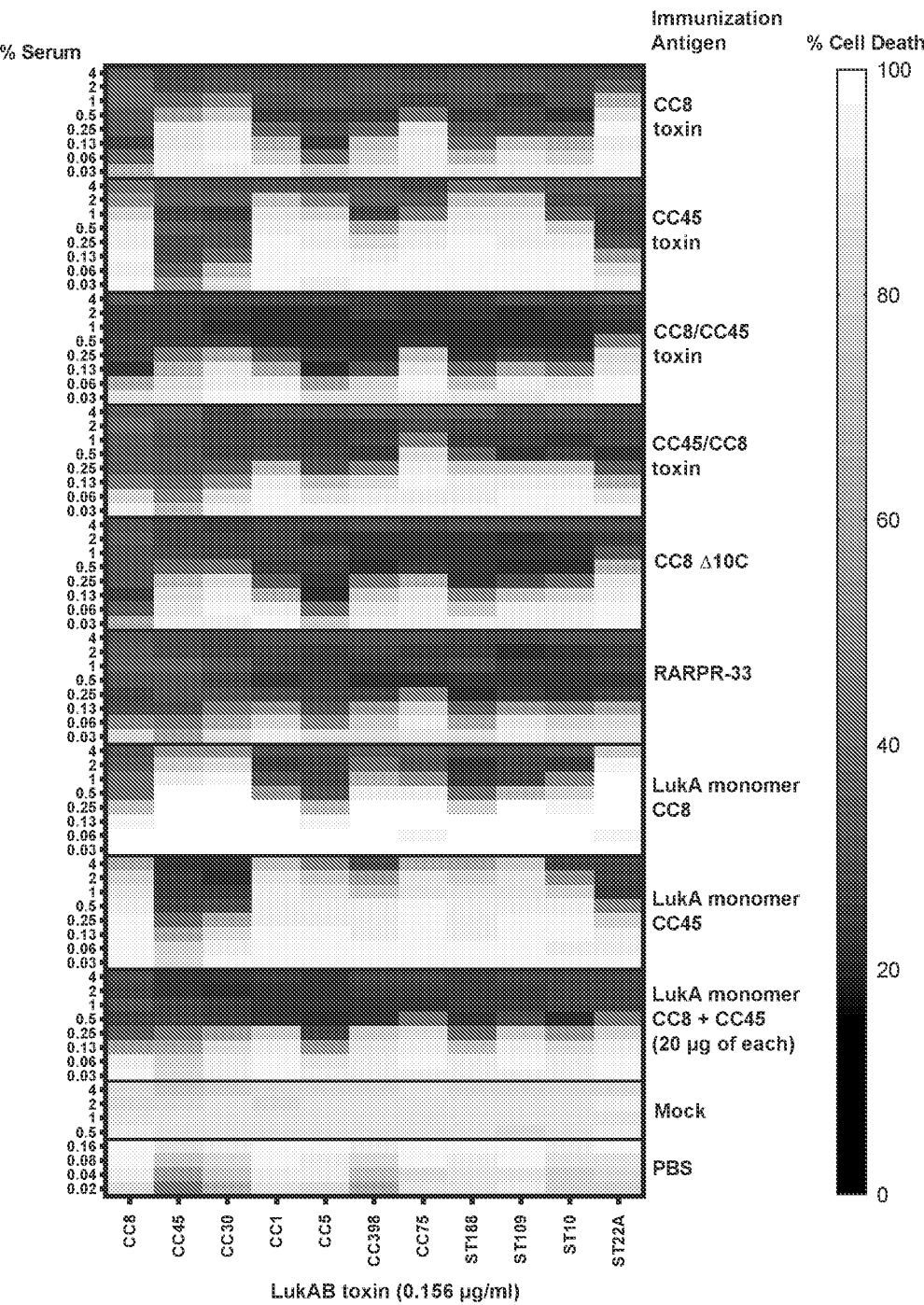


FIG. 4B



Neutralization Assay: % Dead Human PMNs (Intoxication with LD ₅₀ of LukAB variants + 2% serum from immunized mice); n = 4 donors												
LukAB Immunization Antigen		LukAB Variant										
CC8	CC30	CC45	CC1	CC5	CC398	CC75	ST188	ST109	ST110	ST22A		
8.86	19.09	11.91	2.07	3.14	2.35	3.34	3.11	2.57	2.46	31.02		
CC45	1.50	1.05	81.08	80.10	50.46	67.85	81.99	75.90	39.83	2.60		
CC8/CC45	1.46	0.00	0.38	0.00	0.96	1.73	0.00	0.00	0.00	0.76		
CC45/CC8	1.84	1.41	0.13	0.22	0.54	0.54	2.94	0.95	0.99	1.73		
CC8 E323A/CC45	2.90	1.37	0.66	0.23	0.00	4.37	0.06	4.36	0.86	3.91		
CC45 E323A/CC8	7.92	1.28	0.00	0.56	0.00	9.29	2.91	2.30	2.72	2.86		
CC8 E323A/CC45 B5	37.18	51.31	53.86	40.06	39.43	74.44	49.27	23.54	47.30	66.59		
CC45 E323A/CC8 B5	19.57	10.70	47.46	54.36	44.74	64.71	71.72	82.49	75.41	49.76		
RARPR 13	23.49	6.31	3.94	41.95	29.57	1.87	4.58	32.08	16.15	8.42		
RARPR 15	9.22	4.02	4.33	4.02	6.08	4.60	7.66	7.07	6.82	7.15		
RARPR 17	56.11	8.90	4.35	58.37	64.23	4.36	5.00	82.92	40.46	7.22		
RARPR 19	43.11	10.05	10.23	40.04	49.00	9.71	9.49	84.67	17.04	9.39		
SM1W97	9.59	87.32	86.66	2.63	2.90	22.13	16.21	6.57	5.60	87.96		
Mock	88.91	81.28	86.39	87.04	89.89	87.63	93.31	90.54	91.77	92.96		

CC45 B5 and CC8 B5 are LukB deletion variants

*CC8 LukA W97 monomer expressed in HEK293 cells

Neutralization Assay: % Dead Human PMNs (Intoxication with LD ₅₀ of LukAB variants + 2% serum from immunized mice); n = 4 donors												
LukAB Immunization Antigen		LukAB Variant										
CC8	CC30	CC45	CC1	CC5	CC398	CC75	ST188	ST109	ST110	ST22A		
25.46	16.21	17.05	30.25	18.63	27.37	62.95	17.97	22.44	21.63	18.86		
RARPR 30	26.73	18.82	35.26	19.17	18.00	16.62	27.99	29.64	16.48	19.95		
RARPR 31	20.61	78.41	19.06	11.23	42.24	47.72	14.23	23.67	11.37	92.07		
RARPR 32	15.70	30.26	30.64	4.69	6.10	5.11	9.97	5.86	6.17	48.48		
RARPR 33	17.34	8.43	10.14	8.95	12.32	11.81	14.58	11.55	9.08	10.46		
RARPR 34	15.77	11.63	12.92	10.47	9.79	7.19	10.11	5.42	9.00	19.19		
CC8 W97	12.75	78.67	79.96	3.78	4.49	39.56	9.09	10.68	13.01	85.04		
CC45 W97	86.48	26.11	23.68	87.12	89.52	89.11	85.90	86.46	94.08	40.99		
RARPR 31 + CC45 SW97	20.49	27.41	35.17	49.31	18.69	69.42	22.03	45.30	36.26	44.93		
Mock	83.05	83.88	89.56	87.67	87.61	89.76	87.11	90.34	87.75	86.03		

FIG. 6A

Neutralization Assay: % Dead Human PMNs (Intoxication with LD₅₀ of LukAB variants + 1% serum from immunized mice); n = 4 donors

LukAB Immunization Antigen	LukAB Variant										
	CC8	CC30	CC45	CC1	CC5	CC398	CC75	ST188	ST109	ST10	ST22A
CC8	6.31	79.07	78.00	4.08	2.72	2.12	23.47	2.31	1.45	2.05	81.13
CC45	85.25	8.41	5.43	58.13	85.90	83.07	85.32	82.99	82.13	81.58	1.64
CC8/CC45	2.95	2.99	2.55	0.00	0.00	0.00	13.65	0.92	0.00	0.00	19.64
CC45/CC8	12.02	2.54	0.00	69.77	19.76	38.40	30.76	71.31	38.67	48.34	1.02
CC8 E323A/CC45	4.92	5.40	5.15	3.89	1.29	4.67	44.20	0.03	0.50	1.49	16.39
CC45 E323A/CC8	14.19	0.00	0.00	65.49	33.06	67.53	82.11	74.34	25.92	59.28	0.00
CC8 E323A/CC45 B5	44.80	85.76	72.72	88.32	62.49	85.71	98.69	81.54	76.01	81.75	85.04
CC45 E323A/CC8 B5	56.69	58.06	63.51	86.04	73.53	81.75	87.05	86.17	88.14	80.35	72.53
RARPR 13	77.93	4.99	3.09	84.41	80.70	12.54	15.60	80.10	71.92	15.54	0.37
RARPR 15	27.35	2.99	0.67	43.23	50.38	0.93	6.47	33.91	17.17	1.51	1.63
RARPR 17	87.67	5.78	1.96	86.75	85.31	55.72	46.87	86.40	87.35	46.46	3.17
RARPR 19	87.20	6.79	3.53	90.10	89.81	36.00	51.36	87.24	82.62	26.12	5.66
SM1W97	3.48	51.22	89.98	25.96	0.00	73.66	63.47	0.70	6.14	3.10	94.47
Mock	80.53	94.66	93.47	93.61	93.03	93.21	93.94	91.79	92.80	92.35	90.72

Neutralization Assay: % Dead Human PMNs (Intoxication with LD₅₀ of LukAB variants + 1% serum from immunized mice); n = 4 donors

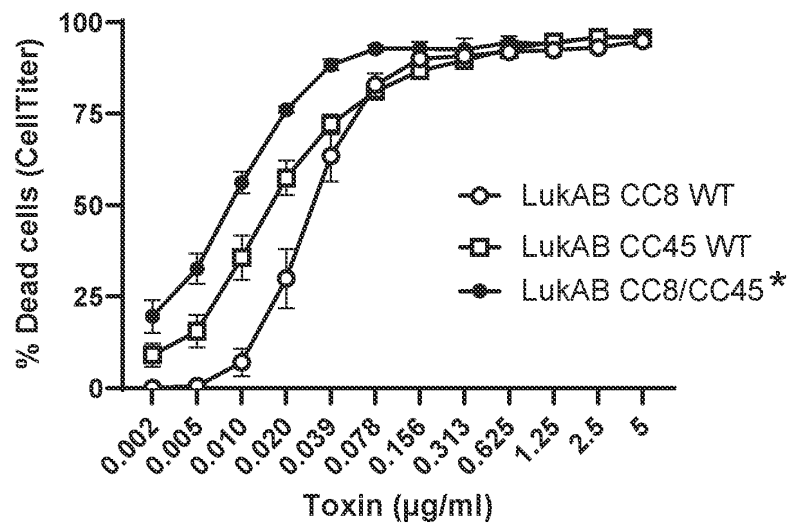
LukAB Immunization Antigen	LukAB Variant										
	CC8	CC30	CC45	CC1	CC5	CC398	CC75	ST188	ST109	ST10	ST22A
CC8 delta10C	21.27	48.38	34.07	71.43	15.91	59.63	79.56	41.56	66.53	56.94	41.67
RARPR 30	28.95	16.90	21.28	77.12	35.04	33.77	26.01	61.04	71.73	32.93	14.38
RARPR 31	21.83	86.11	87.37	84.22	28.40	73.38	75.84	27.79	67.07	33.51	89.39
RARPR 32	9.35	65.16	67.48	4.22	4.52	2.79	12.24	4.71	2.24	2.80	76.28
RARPR 33	17.16	15.09	17.73	14.45	8.25	19.25	15.80	5.89	11.21	6.59	34.68
RARPR 34	22.52	42.51	41.83	6.80	5.30	6.77	15.77	5.37	4.55	6.97	51.43
CC8 W97	11.18	85.66	87.23	32.08	5.73	62.26	64.70	12.38	36.39	22.35	86.48
CC45 W97	89.76	49.88	54.36	86.55	86.81	87.97	87.86	88.78	86.29	86.15	63.53
RARPR 31 + CC45 SW97	37.40	57.23	64.18	85.43	53.18	74.04	81.87	55.68	79.97	67.11	73.77
Mock	95.48	91.86	91.50	95.83	94.50	91.87	93.48	94.48	94.85	94.53	94.72

FIG. 6B

Neutralization Assay: % Dead Human PMNs (Intoxication with LD ₅₀ of LukAB variants + 0.5% serum from immunized mice); n = 4 donors												
LukAB Immunization		LukAB Variant										
Antigen	CC8	CC30	CC45	CC1	CC5	CC398	CC75	ST188	ST109	ST10	ST22A	
CC8	4.72	91.00	89.38	14.98	4.56	39.86	84.43	3.02	3.41	1.99	90.88	
CC45	89.11	13.32	9.54	91.24	91.47	87.94	92.77	85.99	87.64	87.15	26.57	
CC8/CC45	4.20	65.59	74.67	62.14	10.51	77.09	84.91	0.29	18.82	32.31	84.21	
CC45/CC8	71.54	72.15	37.01	89.70	80.64	86.07	85.81	88.62	89.05	86.11	70.59	
CC8 E323A/CC45	15.35	49.18	68.28	86.87	26.99	72.20	86.68	17.24	64.65	24.31	83.01	
CC45 E323A/CC8	76.55	51.02	12.91	89.15	85.25	86.12	90.10	86.75	86.46	88.42	37.10	
CC8 E323A/CC45 B5	84.73	92.88	89.97	90.77	89.44	90.97	93.02	86.62	89.11	89.31	91.77	
CC45 E323A/CC8 B5	89.10	88.13	90.30	89.04	90.22	88.34	91.53	90.09	88.93	91.35	91.72	
RARPR 13	92.34	1.46	1.63	91.95	91.88	55.81	62.35	91.87	88.36	80.69	6.74	
RARPR 15	90.27	3.35	0.00	92.63	88.06	58.82	82.81	91.54	89.37	57.13	1.32	
RARPR 17	92.25	1.35	0.48	92.38	92.90	91.11	89.94	92.48	92.80	87.28	1.26	
RARPR 19	92.63	3.62	2.11	90.72	89.79	84.15	87.78	91.37	93.34	85.11	4.16	
SM1W97	18.13	89.96	92.05	90.59	38.57	87.10	89.10	29.16	81.63	61.72	93.27	
Mock	93.93	91.94	90.60	91.04	94.85	93.06	91.54	93.06	91.73	93.38	95.19	

Neutralization Assay: % Dead Human PMNs (Intoxication with LD ₅₀ of LukAB variants + 0.5% serum from immunized mice); n = 4 donors												
LukAB Immunization		LukAB Variant										
Antigen	CC8	CC30	CC45	CC1	CC5	CC398	CC75	ST188	ST109	ST10	ST22A	
CC8 delta10C	19.20	65.77	66.31	96.52	42.73	76.84	85.46	79.13	84.85	76.30	75.28	
RARPR 30	46.84	15.56	14.27	98.08	66.72	68.45	52.83	84.26	88.95	65.96	16.73	
RARPR 31	34.37	87.32	86.47	96.14	59.72	85.14	86.23	67.96	87.03	70.30	87.93	
RARPR 32	9.45	83.44	82.39	11.75	2.85	8.76	50.03	2.16	2.19	4.66	87.02	
RARPR 33	10.96	54.83	51.44	47.75	4.47	51.89	51.85	7.31	43.18	24.47	76.12	
RARPR 34	13.48	72.28	75.08	10.15	5.99	21.47	54.74	4.39	9.09	5.88	84.63	
CC8 W97	72.37	80.37	87.69	18.45	60.44	81.25	52.60	56.74	54.95	78.52	84.32	
CC45 W97	82.00	72.03	74.38	88.00	87.58	90.84	86.38	85.34	86.90	90.92	82.63	
RARPR 31 + CC45 SW97	65.05	79.43	81.49	90.96	84.01	86.00	87.49	83.63	89.68	81.75	85.32	
Mock	93.19	88.06	90.18	94.18	94.00	90.17	93.48	94.17	94.28	92.16	92.91	

FIG. 6C



*LukAB CC8/CC45 tested in 4 donors only

FIG. 7A

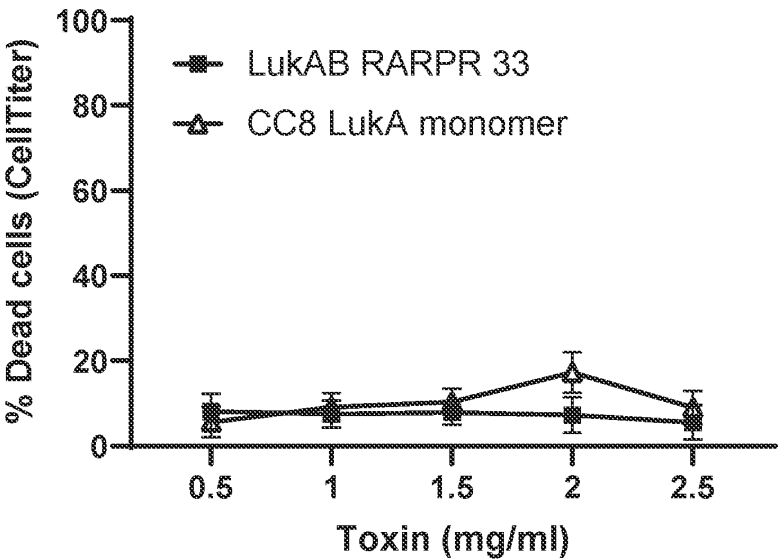


FIG. 7B

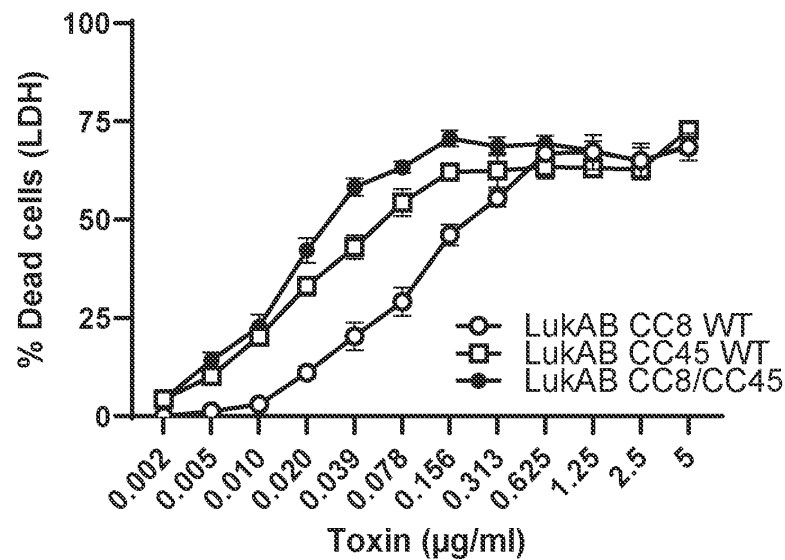


FIG. 7C

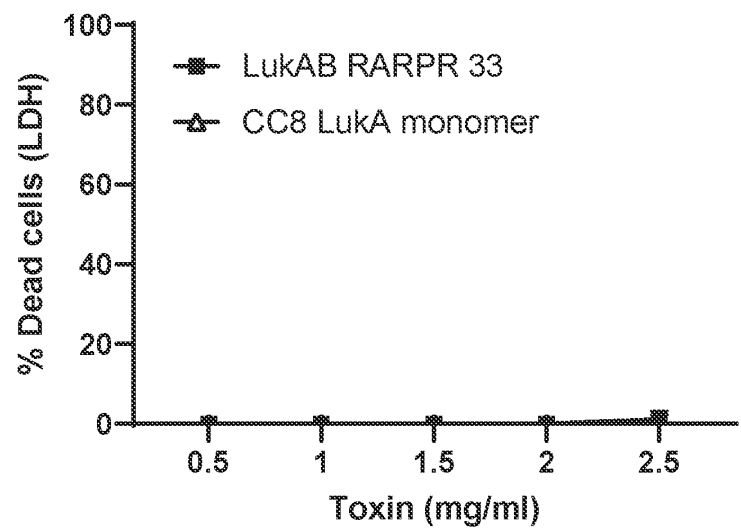


FIG. 7D

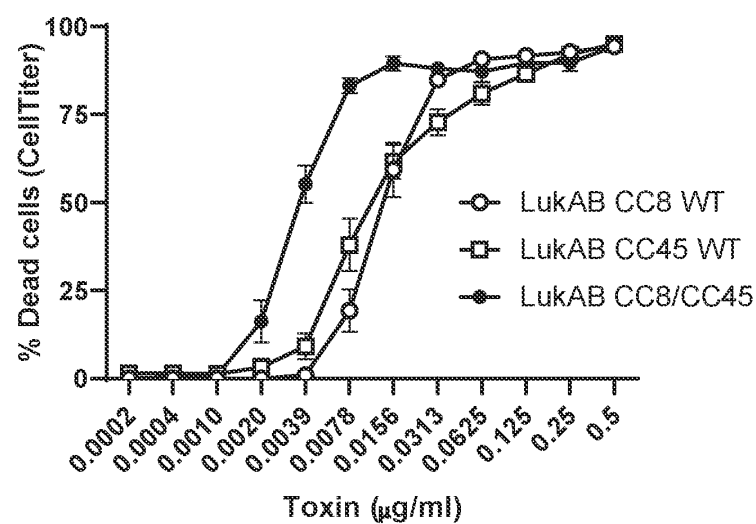


FIG. 8A

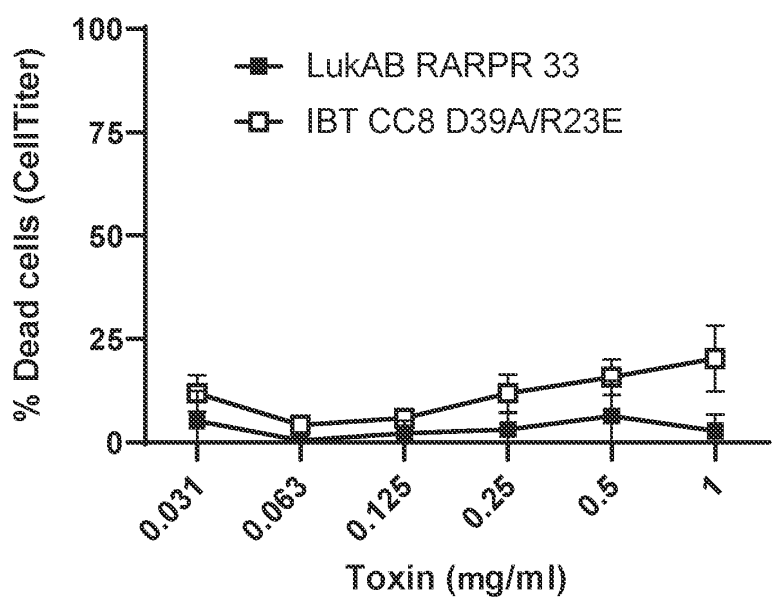


FIG. 8B

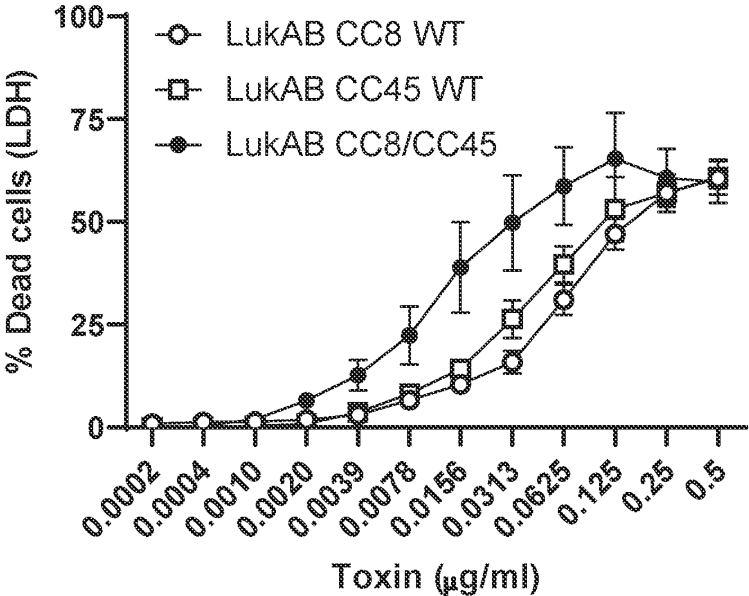


FIG. 8C

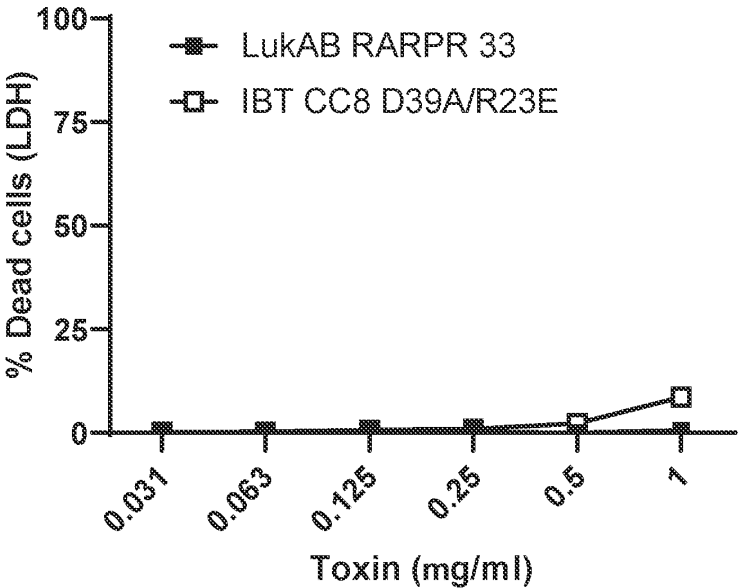


FIG. 8D

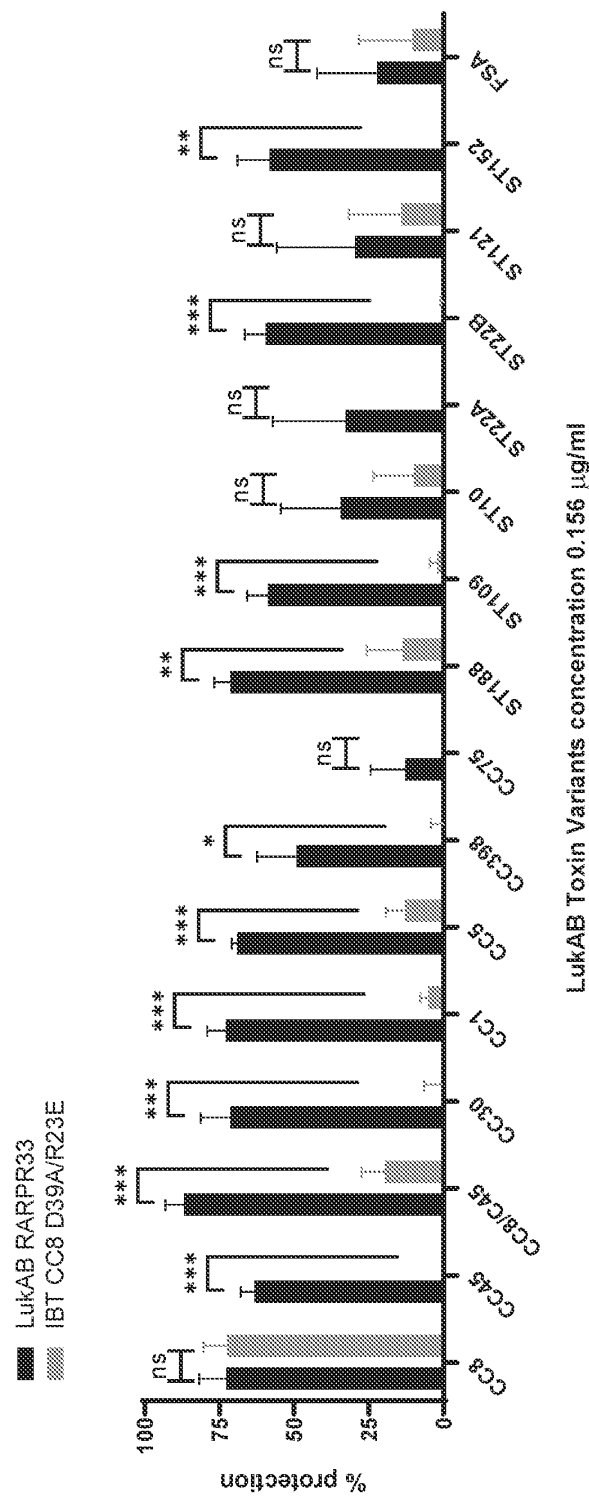


FIG. 9