

P protein

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EZ vaccine      1 MAEEQARHVKNGL ECI RALKAEP IGSLAIEEAMAAWSEI 39
Bilthoven WT   1 -----Q----- 1

40 SDNPGQERATCREEKAGSSGLSKPCLSAIGSTEGGAPRI 78
2 -----A-K-----S----- 4

79 RGQGPGESDDDAETLGIPPRNLQASSTGLQCYVVDHSG 117
5 ----S-----SG----- 7

118 EAVKGIQDADSIMVQSGLDGDDSTLSGGDNESENSDVDIG 156
-----

157 EPDTEGYAITDRGSAPISMGFRA SDVETAEGGEIHELLR 195
-----

196 LQSRGNFPKLGKTLNVPPPPDPGRASTSGTPIKKGTDA 234
8 -----R-----L--L-----E----- 11

235 RLASFGTEIASLLTGATQCARKSPSEPSGPGAPAGNVP 273
-----

274 ECVSNAALIQEWTPESGTTISPRSQNNEEGGDYYDDELFI 312
12 -----V----- 12

313 SDVQDIKTALAKIHEDNQKIISKLESLLLLKGEVESIKK 351
-----

352 QINRQNI S ISTLEGLHLSIMIAIPGLGKDPNDPTADVEI 390
13 -----F----- 13

391 NPD LKPIIGRDSGRALAEVLKKPVASRQLQGMTNGRTSS 429
14 -----I----- 14

430 RGQLLKEFQLKPIGKKMSSAVGFVPDTGPASRSVIRSI 468
-----

469 KSSRLEEDRKRYLMTLLDDIKGANDLAKFHQMLMKIIMK 507
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M Protein

EZ vaccine	1 MTEIYDFDKSAWDIKGLIAPIQPTTYS DGR LVPQVRVID	39
Bilthoven WT	1 -----S-----	1
	40 PGLGDRKDEC FMYMFL LGVVEDSDP LGPPIGRAF GSLPL	78

	79 GV GKSTAKPEKLLKEATELDIVVRRTAGLNEKLVFYNNT	117
	2 ---R-----E-----	3
	118 PLTLLTPWRKVLTTG SVFNANQVCSAVNLIPLDTPQRFR	156
	4 -----I-----N-----	5
	157 VVYMSITRLSDNGY YTVPRRMLEFRSVNAVA FNLLVTLR	195

	196 IDK AIGPGKIIDNTEQLPEATFMVHIGNFRRKKSEVYSA	234
	6 -----H-----A-----	7
	235 DYCKMKIEKMGLV FALGGIGG TSLHIRSTGKM SKTLHAQ	273

	274 LGFKKTL CYPLIDINEDLNRL LWR SRCKIVRIQAVLQPS	312
	8 -----M-----V-----	9
	313 VPQEFR IYDDVIINDDQGLFKVL	335

F Protein

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EZ vaccine   1 M S I M G L K V N V S A I F M A V L L T L Q T P T G Q I H W G N L S K I G V V   39
Bilthoven WT -----

40 G I G S A S Y K V M T R S S H Q S L V I K L M P N I T L L N N C T R V E I A E   78
-----

79 Y R R L L R T V L E P I R D A L N A M T Q N I R P V Q S V A S S R R H K R F A   117
1 ----- F ----- 1

118 G V V L A G A A L G V A T A A Q I T A G I A L H Q S M L N S Q A I D N L R A S   156
-----

157 L E T T N Q A I E A I R Q A G Q E M I L A V Q G V Q D Y I N N E L I P S M N Q   195
-----

196 L S C D L I G Q K I G L K L L R Y Y T E I L S L F G P S L R D P I S A E I S I   234
-----

235 Q A L S Y A L G G D I N K V L E K L G Y S G G D L L G I L E S R G I K A R I T   273
-----

274 H V D T E S Y F I V L S I A Y P T L S E I K G V I V H R L E G V S Y N I G S Q   312
-----

313 E W Y T T V P K Y V A T Q G Y L I S N F D E S S C T F M P E G T V C S Q N A L   351
-----

352 Y P M S P L L Q E C L R G S T K S C A R T L V S G S F G N R F I L S Q G N L I   390
-----

391 A N C A S I L C K C Y T T G T I I N Q D P D K I L T Y I A A D H C P V V E V N   429
-----

430 G V T I Q V G S R R Y P D A V Y L H R I D L G P P I S L E R L D V G T N L G N   468
-----

469 A I A K L E D A K E L L E S S D Q I L R S M K G L S S T S I V Y I L I A V C L   507
-----

508 G G L I G I P A L I C C C R G R C N K K G E Q V G M S R P G L K P D L T G T S   546
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547 K S Y V R S L                                     553
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H Protein

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EZ vaccine 1 M SPQRDR INAFYKDNPHPKGSR IV INREHLM IDRPHYVLL 39
Bilthoven WT -----

40 AVLFVVMFLSL IGLLA IAG IRLHRAA IYTAE IHKSLSTNL 78
-----

79 DVTNS IEHQVKDVL TPLPK IIGDEVGLRTPQR PTDLVKF 117
-----

118 ISDK IKFLNPDREYDFRD LTWC INPPER IKLDYDQYCAD 156
-----

157 VAAEELMNALVNST LLETRTTNQ FLAVSKGNC SGPTT IR 195
-----

196 GQFSNM SLSLLDLY LGRGYNVSS IVTMT SQGM YGGTYLV 234
1 -----S----- 1

235 EKPNLSSKRSELSQ LSMYRVFVGV IRNPG LGAPVPHMT 273
2 -----G----- 2

274 NYLEQPA SNDLSN CMVALGELK LAA LCHGEDS ITIPYQG 312
3 --F--V-----G----- 5

313 SGKGVSPQ LVKLG VWKSP TDMQSW VPLSTDDPV IDRLYL 351
6 -----F----- 6

352 SSHRGV IADNQAKWAVPTTRTDDKLRM ETCFQQACKGKI 390
7 -----I----- 7

391 QALCENPEWAPLKDNR IPSYGVLSVDLSLTVELK IKIAS 429
8 -----H-----A----- 9

430 GFGPLITHGSGMDLYKSNHNNVYWL TIPP MKNLALGV IN 468
10 -----E----- 10

469 TLEWIPRFKVSPLYLPNVPIKEAGEDCHAPTYPAEVDGD 507
11 -----N--T----- 12

508 VKLSSNLVILPGQDLQYV LATYDTSRVEHAVVYVYSPG 546
-----S 13

547 RSFSYFYPFRLP IKGVP IELQVECFTWDQKLWCRHFCVL 585
14 -----I----- 14

586 ADSESGGHITHSGMVGMGV SCTVTR EDGTNRR 617
15 -----S- 15
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L protein

EZ vaccine	1 M D S L S V N Q I L Y P E V H L D S P I V T N K I V A I L E Y A R V P H A Y S	39
Bilthoven WT	-----	
	40 L E D P T L C Q N I K H R L K N G P S N Q M I I N N V E V G N V I K S K L R S	78
	1 ----- I -----	1
	79 Y P A H S H I P Y P N C N Q D L F N I E D K E S T R K I R E L L K K G N S L Y	117

	118 S K V S D K V P Q C L R D T N S R L G L G S E L R E D I K E K V I N L G V Y M	156
	2 ----- N ----- T -----	3
	157 H S S Q W P E P F L P W P T V K T E M R S V I K S Q T H T C H R R R H T P V F	195

	196 F T G S S V E L L I S R D L V A I I S K E S Q H V Y Y L T F E L V L M Y C D V	234

	235 I E G R L M T E T A M T I D A R Y T E L L G R V R Y M W K L I D G F F P A L G	273

	274 N P T Y Q I V A M L E P L S L A Y L Q L R D I T V E L R G A F L N H C P T E I	312

	313 H D V L D Q N G F S D E G T Y H E L I E A L D Y I P I T D D I H L T G E I P S	351
	4 ----- Y -----	4
	352 F F R S F G H P R L E A V T A A E N V R K Y M N Q P K V I V Y E T L M K G H A	390

	391 I F C G I I I N G Y R D R H G G S W P P L T L P L H A A D T I R N A Q A S G E	429

	430 G L T H E Q C V D N W K S P A G V K P G C F M P L S L D S D L T M Y L K D K A	468

	469 L A A L Q R E W D S V Y P K E F L R Y D P P K G T G S R R L V D V F L N D S S	507

	508 F D P Y D V I M Y V V S G A Y L H D P E F N L S Y S L K E K E I K E T G R L F	546
	5 ----- M -----	5
	547 A K M T Y K M R A C Q V I A E N L I S N G I G K Y P K D N G M A K D E H D L T	585

	586 K A L H T L A V S G V P K D L K E S H R G G P V L K T Y S R S P V H T S T R N	624
	6 ----- N -----	6
	625 V R A A K G F I G F P Q V I R Q D Q D T D H P E N M E A Y E T V S A F I T T D	663
	7 ----- I ----- N ----- S -----	9
	664 L K K Y C L N W R Y E T I S L F A Q R L N E I Y G L P S F F Q W L H K R L E T	702

	703 S V L Y V S D P H C P P D L D A H I P L Y K V P N D Q I P I K Y P M G G I E G	741
	10 ----- C -----	10

742 YCQKLT IST IPYLYLAAYESGVR IASLVQGDNQT IAVT 780

781 KRVPSTWPFYNLKKREAAARVTRDYFV ILRQRLHD IGHHLK 819

820 ANETIVSSHFPVYSKG IYYDGLLV SQ SLK S IARCVFWSE 858

859 TIVDETRAACSN IATTMAKS IERGYDRYLAYS LNVLKVI 897

898 QQ ILISLGFT INSTMTRDVV IP LLTNNDLL IRMALLPAP 936
11 -----Q----- 11
937 IGGMNYLNM SRLPVRN IGDPVTSS IADLKRMLASLMPE 975

976 ETLHQVMTQQPGDSSFLDWA SDPY SANLVCVQ S ITRLLK 1014

1015 NITARFVLIHSPNPM LKGLFHDDSK EDEGLAAPLMDRH 1053

1054 IIVPRAAHEILDHSV TGARES IAGMLD TT KGLIRASMRK 1092

1093 GGLTSRV ITRLSNYDYEQ FRAGMV LLTGRKRNVLIDKES 1131

1132 CSVQLARALR SHMWARLARGRP IYGLEVPDVL ESMRGHL 1170

1171 IRRHETCV ICECGSVNYGW FFVPSGCQLDD IDKETSSLR 1209

1210 VPYIGSTTDERTDMKLA FVRAPSR SLRS AVR IATVYSWA 1248

1249 YGDDSSSWNEAWLLARQRANV SLEELRV ITP ISTSTNLA 1287

1288 HRLRDRSTQVKYSGT SLVRVARYTT ISNDNLSFV ISDKK 1326

1327 VDTNFIYQQGMLLGLGVLET LFRLEKDTGSSNTVLHLHV 1365

1366 ETDCCVIPM IDHPRIPSSRKLELRAELCTNPLIYDNAPL 1404

1405 IDRDTTRLYTQSHRRHLVEFVTWSTPQLYHILAKSTALS 1443
12 -----A----- 12
1444 MIDLVTKFEKDHMNEISALIGDDDINSFITEFLLIEPRL 1482

1483 FT IYLGQCAA INWAFDVHYHRP SGKYQMGELLSSFLSRM 1521
13 -----F-- 13
1522 SKGVFKVLVNALSHPK IYKKFWHCG IIEP IHGPSLDAQN 1560

1561 LH TVCNM VYTCYMTY LDLLLNEELEEF TFLLCESDEDV 1599

1600 VPDRFDN IQAKHL CVLADLYCQPGT CPP IRGLRPVEKCA 1638

1639 VLTDH IKA EARLSPAGSSWN INP IIVDHYSCLTYLRRG 1677

1678 SIKQ IRLRVDPGF IFDALAEVNV SQPK IGSNN ISNM SIK 1716

1717 AFRPPHDDVAKLLKD INTSKHNL PISGGNLANYE IHA FR 1755
14 D----- 14
1756 RIGLNSSACYKAVE ISTLIRRCLEPGEDGLFLGEGSGSM 1794

1795 LITYKEILKLNKCFYNSGV SANSR SGQRELAPYPSEVGL 1833

1834 VEHRMGVGN IVKVLFN GRPEVTWVGSVDCPNF IVSN IPT 1872
15 -----Y----- 15
1873 SSVGFIHSD IETLPNKDT IEKLEELAA ILSMALLLGKIG 1911

1912 SILV IKLMPFSGDFVQGFISYVGS HYREVN LVYPRYSNF 1950

1951 ISTE SYLVM TDLKANRLMNPEK IKQQ IIESSVRTSPGLI 1989

1990 GH ILSIKQLSCLQA IVGDAVSRGD INPTLKKLTP IEQVL 2028
16 -----V----- 16
2029 INCGLA INGPKLCKEL IHHDVASGQDGLLNS ILILYREL 2067

2068 ARFKDNQR SQQGM FHAYPVLV SSRQREL ISR ITRKFWGH 2106

2107 ILLYSGNRKL INKF IQNLKSGYL ILDLHQN IFVKNLSKS 2145

2146 EKQ IIMTGGLKREWVFKVTVKETKEWYKLVGYSALIKD 2183

Table S1. Plasma levels of IL-1 β , IFN- γ , IL-12, IL-17, CCL2, CCL11, CCL22, CXCL9, CXCL11, MIF and β FGF of individual macaques, corresponding to Figure 6.

CCL11 (pg/ml) Day post-infection	WT MeV					LAMV				
0	923	687	468	424	794	429	488	498	481	502
3	2128	1250	825	665	1041					
7	1835	1793	752	243	1121	562	793	483		
10	1804	2326	877							
14	808	1145	474	387	550	613	586	509	139	179
24	1065	1172	527	300	1143					
28						625	637	524	478	381

β FGF (pg/ml) Day post-infection	WT MeV					LAMV				
0	24.4	26.6	26.7	23.3	25	14.7	21.6	14.7	24.4	21.6
3	24.4	23.3	19.8	26.6	19.8					
7	27.6	26.6	18.6	21	26.6	25.5	22.2	16		
10	29.7	26.6	26.6							
14	25.5	19.8	19.2	19.8	207.9	23.9	21	18.6	16	17.3
24	24.4	17.3	14.7	19.8	148.5					
28						21.6	28.7	18.6	18.6	27.6

IFN- γ (pg/ml) Day post-infection	WT MeV					LAMV				
0	0	0	0	5	13.3	0	0	0	0	0
3	5	17	5	0	0					
7	193	121	39.3	20.5	97.4	0	0	0		
10	298	107	104.7							
14	61.7	27	13.3	27.1	906	0	0	0	0	0
24	13.3	20.5	0	0	661					
28						5	0	0	0	0

IL-1 β (pg/ml) Day post-infection	WT MeV					LAMV				
0	54.5	49.5	47.4	47.9	55.4	38.7	44.9	40.7	48.7	47.2
3	66.5	62.3	50.7	48.2	48.2					
7	66.7	64.4	44.6	28.3	50.9	52.3	54.1	38.6	34.8	36.7
10	73.5	67.5	56.7							
14	62.6	56.3	42.1	44.4	67.5	44.2	46.9	37.8	46.3	44.3
24	52.5	58.4	42.7	47.3	72					
28						54.7	49.4	39.9	43.2	46.3

IL-12 (pg/ml) Day post-infection	WT MeV					LAMV				
0	1127	745	500	500	500	500	500	500	500	768
3	1998	1339	500	500	500					
7	2820	1476	587	500	500	500	500	500		
10	2963	1654	934							
14	3925	500	1190	500	5031	500	500	500	500	500
24	2711	1127	500	500	3474					
28						500	500	500	500	1127

CXCL11 (pg/ml) Day post-infection	WT MeV					LAMV				
0	756	1677	821	200	200	200	200	200	200	200
3	922	1783	1047	748	541					
7	1698	3065	2978	756	2997	200	200	200	200	200
10	3875	2932	1452							
14	200	284	390	530	632	200	200	200	200	200
24	432	979	235	200	882					
28						200	200	200	200	200

CCL2 (pg/ml) Day post-infection	WT MeV					LAMV				
0	563	343	287	323	278	190	231	204	270	300
3	1083	453	547	402	467					
7	1177	751	538	307	742	320	436	347		
10	939	716	774							
14	554	368	380	346	368	264	226	256	344	293
24	802	425	349	292	451					
28						304	386	375	310	372

CCL22 (pg/ml) Day post-infection	WT MeV					LAMV				
0	276	949	10	10	10	10	169	229	10	77
3	1034	1967	349	10	10					
7	824	2206	57	10	10	10	987	229		
10	554	528	10							
14	501	790	15	10	10	10	1132	510	10	26
24	867	1468	202	10	10					
28						10	936	398	202	253

MIF (pg/ml) Day post-infection	WT MeV					LAMV				
0	713	1618	1524	2374	605	173	764	717	567	481
3	2079	1787	3913	411	280					
7	4588	298	714	133	642	4247	270	1256		
10	1862	466	716							
14	704	232	1317	388	454	278	185	374	142	196
24	1842	409	784	403	104					
28						1487	2025	546	275	698

IL-17 (pg/ml) Day post-infection	WT MeV					LAMV				
0	144	96	42.3	28.5	1	80.6	33.3	16.8	70.6	145
3	42	64.5	38.3	110.9	1.9					
7	54	82	21.8	93.6	1	66.2	2	37.7	44.7	106.5
10	34	1	21.6							
14	10	1	19.2	1	19.7	62.1	32.5	38.8	30.1	163.4
24	59	1	44.1	9.8	17.9					
28						166.6	8.9	51.8	17.2	180.6

CXCL9 (pg/ml) Day post-infection	WT MeV					LAMV				
0	138	176	122	138	164	50	75	75	90	75
3	164	196	176	176	164					
7	238	295	246	176	343	103	122	50		
10	573	590	635							
14	246	186	152	230	186	50	103	75	75	122
24	176	186	138	164	253					
28						138	75	75	122	138

Table S2. MeV-specific IgG of individual macaques measured by enzyme immunoassays (EIAs), corresponding to Figure 7a.

Day post infection	WT								LAMV					
0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	1.4	2.0	1.0
14	6.0		3.5		5.0	6.0	5.0	7.0	8.5	4.0	5.0	5.5	5.0	4.5
24	8.0	6.5	8.5	8.5	7.0	8.0	7.5	8.5						
28									7.5	5.5	7.0	7.0	5.0	6.0
35	9.0	7.5	9.0	8.5		8.0	8.5	8.5						
42									7.5	5.0	6.0	7.0	5.0	6.5
50		8.0	9.0	9.0	9.5	8.0	7.5							
56									8.0	4.5	6.0	6.5	5.0	7.0
69		8.0	9.0	10.5		8.0	8.0	9.0	9.0	4.5	6.0	6.0	5.0	8.0
83	10.0	8.0	9.0	10.5	9.5			9.0	8.0	5.0	6.0	6.0	5.0	7.5

Table S3. H-specific IgG of individual macaques measured by enzyme immunoassays (EIAs), corresponding to Figure 7c.

Day post infection	WT						LAMV					
0	0	0.67	0.76	0	0	1.76	0	0	0	0	0	0.75
7	0	0	0	0	0	2.65						
10	0	0	0		0	3.6						
14	4	5.74	5.69	5	2	3.6	1.6	0	3	0	0	0.75
17	4.5	6.32	7.53	8.7	5	4.5						
24	6	6.94	9	9.3	5.8		4.5	3	6	3.9	3	4
35	7.54	7.12	8.86	8.7	6							
50	7.84	7.4	9	9	7.7	7.3	6.44	3.5	5.8	5.3	2.6	5