#	Sequence	Pool	#	Sequence	Pool
1.1	MKIIFFLCSFLFFII	1	55	EKSNVEVKIKELNYLKTIQD	W33
1.2	FLCSFLFFIINTQCV	1	56	ELNYLKTIQDKLADFKKNNN	W33
2	LFFIINTQCVTHESYQELVK	1	57	KLADFKKNNNFVGIADLSTD	W33
3	THESYQELVKKLEALEDAVL	1	58	FVGIADLSTDYNHNNLLTKF	W33
4	KLEALEDAVLTGYSLFQKEK	1	59	YNHNNLLTKFLSTGMVFENL	W33
5	TGYSLFQKEKMVLNELFDLT	1	60	LSTGMVFENLAKTVLSNLLD	W33
6	MVLNELFDLTNHMLTLCDNI	3	61	AKTVLSNLLDGNLQGMLNIA	W33
7	NHMLTLCDNIHGFKYLIDGY	3	62	GNLQGMLNIAQHQCVKKQIP	W19
8	HGFKYLIDGYEEINELLYKL	3	63	QHQCVKKQIPQNSGCFRHLD	W19
9	EEINELLYKLNFYFDLLRAK	3	64	QNSGCFRHLDEREEWKCLLN	W19
10	NFYFDLLRAKLNDVCANDYC	3	65	EREEWKCLLNYKQEGDKCVE	W19
11	LNDVCANDYCQIPFNLKIRA	3	66	YKQEGDKCVENPNPTCNENN	W19
12	QIPFNLKIRANELDVLKKLV	3	67	NPNPTCNENNGGCDADAKCT	W19
13	NELDVLKKLVFGYRKPLDNI	3	68	GGCDADAKCTEEDSGSNGKK	W19
14	FGYRKPLDNIKDNVGKMEDY	3	69	EEDSGSNGKKITCECTKPDS	W19
15	KDNVGKMEDYIKKNKTTIAN	3	70	ITCECTKPDSYPLFDGIFCS	W19
16	IKKNKTTIANINELIEGSKK	3	71	YPLFDGIFCSSSNGGGPGGG	W19
17	INELIEGSKKTIDQNKNADN	3	72	SSNGGGPGGGDQVVTGEAIS	M33
18	TIDQNKNADNEEGKKKLYQA	3	73	VTMDNILSGFENEYDVIYLK	M33
19	EEGKKKLYQAQYDLSIYNKQ	3	74	DQVVTGEAISVTMDNILSGF	M33
20	QYDLSIYNKQLEEAHNLISV	3	75	ENEYDVIYLKPLAGVYRSLK	M33
21	LEEAHNLISVLEKRIDTLKK	3	76	PLAGVYRSLKKQIEKNIFTF	M33
22	LEKRIDTLKKNENIKIKEIA	3	77	KQIEKNIFTFNLNLNDILNS	M33
23	NENIKIKEIAKTIKFNIDSL	5	78	NLNLNDILNSRLKKRKYFLD	M33
24	KTIKFNIDSLFTDPLELEYY	5	79	RLKKRKYFLDVLESDLMQFK	M33
25	FTDPLELEYYLREKNKKMQI	5	80	VLESDLMQFKHISSNEYIIE	M33
26	LREKNKKMQIKKLTLLKEQL	12	81	HISSNEYIIEDSFKLLNSEQ	M33
27	KKLTLLKEQLESKLNSLNNP	12	82	DSFKLLNSEQKNTLLKSYKY	M33
28	ESKLNSLNNPHNVLQNFSVF	12	83	KNTLLKSYKYIKESVENDIK	M33
29	HNVLQNFSVFFNKKKEAEIA	12	84	IKESVENDIKFAQEGISYYE	M33
30	FNKKKEAEIAETENTLENTK	12	85	FAQEGISYYEKVLAKYKDDL	M33
31	ETENTLENTKILLKHYKGLV	12	86	KVLAKYKDDLESIKKVIKEE	M33
32	ILLKHYKGLVKYYNGESSPL	12	87	ESIKKVIKEEKEKFPSSPPT	M33
33	KYYNGESSPLKTLSEVSIQT	12	88	KEKFPSSPPTTPPSPAKTDE	M33
34	KTLSEVSIQTEDNYANLEGQ	12	89	TPPSPAKTDEQKKESKFLPF	M33
35	EDNYANLEGQVVTGEAVTPS	W33	90	QKKESKFLPFLTNIETLYNN	M33
36	VVTGEAVTPSVIDNILSKIE	W33	91	LTNIETLYNNLVNKIDDYLI	M33
37	VIDNILSKIENEYEVLYLKP	W33	92	LVNKIDDYLINLKAKINDCN	M33
38	NEYEVLYLKPLAGVYRSLKK	W33	93	NLKAKINDCNVEKDEAHVKI	M33
39	LAGVYRSLKKQLENNVMTFN	W33	94	VEKDEAHVKITKLSDLKAID	M33
40	QLENNVMTFNVNVKDILNSR	W33	95	TKLSDLKAIDDKIDLFKNPY	M33
41	VNVKDILNSRFNKRENFKNV	W33	96	DKIDLFKNPYDFEAIKKLIN	M33
42	FNKRENFKNVLESDLIPYKD	W33	97	DFEAIKKLINDDTKKDMLGK	M33
43	LESDLIPYKDLTSSNYVVKD	W33	98	DDTKKDMLGKLLSTGLVQNF	M33
44	LTSSNYVVKDPYKFLNKEKR	W33	99	LLSTGLVQNFPNTIISKLIE	M33
45	PYKFLNKEKRDKFLSSYNYI	W33	100	PNTIISKLIEGKFQDMLNIA	M33
46	DKFLSSYNYIKDSIDTDINF	W33	101	GKFQDMLNIAQHQCVKKQIP	M19
47	KDSIDTDINFANDVLGYYKI	W33	102	QHQCVKKQIPENSGCFRHLD	M19
48	ANDVLGYYKILSEKYKSDLD	W33	103	ENSGCFRHLDEREEWKCLLN	M19

49	LSEKYKSDLDSIKKYINDKQ	W33	106	NPNPTCNENNGGCDADATCT	M19
50	SIKKYINDKQGENEKYLPFL	W33	107	GGCDADATCTEEDSGSSRKK	M19
51	GENEKYLPFLNNIETLYKTV	W33	108	EEDSGSSRKKITCECTKPDS	M19
52	NNIETLYKTVNDKIDLFVIH	W33	109.1	YPLFDGIFCSSSNLI	M19
53	NDKIDLFVIHLEAKVLNYTY	W33	109.2	GIFCSSSNLILYSFI	M19
54	LEAKVLNYTYEKSNVEVKIK	W33			

Table S5. MSP1 overlapping peptides. 20mer peptides overlapping by 10 aa were generated for the whole of the MSP1 vaccine insert present in the ChAd63 and MVA vaccines (except for four peptides which were made as 15mers overlapping by 10aa – peptides #1.1, 1.2, 109.1 and 109.2). Peptide sequences are shown, and pools indicated: 1 = sequence for Block 1 (*n* = 6); 3 = sequence for Block 3 (*n* = 17); 5 = sequence for Block 5 (*n* = 3); 12 = sequence for Block 12 (*n* = 9); W33 = sequence for Wellcome allele $MSP1_{33}$ / Block 16 (*n* = 27); W19 = Wellcome allele $MSP1_{19}$ / Block 17 (*n* = 10); M33 = sequence for MAD20 allele $MSP1_{33}$ / Block 16 (*n* = 29); and M19 = MAD20 allele $MSP1_{19}$ / Block 17 excluding those peptide sequences duplicated in W19 (*n* = 8). Peptides spanning the fusion sites of each block of sequence, to enable assessment of responses to artificial epitopes present in the vaccine construct but not the native MSP1 protein, were used in a subsequent trial and will be reported separately (Sheehy SH and Elias SC et al., manuscript in preparation).