Supplementary Table 1: Human subject information (n=12 subjects, n=15 samples)

Donor	Source	Time point
Pool 1	Red cross buffy pack, 5 donors pooled	Donation
Pool 2	Red cross buffy pack, 5 donors pooled	Donation
Infected 1	Household infection study	Day 0 (recruitment)
Positive 1	Household infection study	Day 0 (baseline)
Positive 2	Household infection study	Day 0
Positive 3	Household infection study	Day 0
Negative 1	Household infection study	Day 0
Negative 2	Household infection study	Day 0
Negative 3	Household infection study	Day 0
Donor 1 pre	Community H1N1-2009 sero-surveillance	Donation, baseline
Donor 1 post	Community H1N1-2009 sero-surveillance	Follow up, HAI+ H1N1-2009 infection positive
Donor 2 pre	Community H1N1-2009 sero-surveillance	Donation, baseline
Donor 2 post	Community H1N1-2009 sero-surveillance	Follow up, HAI+ H1N1-2009 infection positive
Donor 3 pre	Community H1N1-2009 sero-surveillance	Donation, baseline
Donor 3 post	Community H1N1-2009 sero-surveillance	Follow up, HAI+ H1N1-2009 infection positive

Supplementary Table 2: Overlapping peptide library for stimulation and * selected peptides for mouse vaccination.

Group	aa position start	end	Number	H1-HA peptides	H7-HA peptides	% aa similarity
	1	25	1	MKAILVVLLYTFATANADTLCIGYH	MNTQILVFALIAIIPTNADKICLGH	57.1
	13	38	2	TANADTLCIGYHANNSTDTVDTVLE	IPTNADKICLGHHAVSNGTKVNTLT	76.2
	26	51	3	NNSTDTVDTVLEKNVTVTHSVNLLE	AVSNGTKVNTLTERGVEVVNATETV	65
	39	64	4	NVTVTHSVNLLEDKHNGKLCKLRGV	RGVEVVNATETVERTNIPRICSKGK	52.6
	52	77	5	KHNGKLCKLRGVAPLHLGKCNIAGW	RTNIPRICSKGKRTVDLGQCGLLGT	60
	65	90	6	PLHLGKCNIAGWILGNPECESLSTA	TVDLGQCGLLGTITGPPQCDQFLEF	70.6
	78	103	7	LGNPECESLSTASSWSYIVETPSSD	TGPPQCDQFLEFSADLIIERREGSD	41.7
	91	116	8	SWSYIVETPSSDNGTCYPGDFIDYE	ADLIIERREGSDVCYPGKFVNEEAL	80
	104	129	9	GTCYPGDFIDYEELREQLSSVSSFE	CYPGKFVNEEALRQILRESGGIDKE	75
	117	142	10	LREQLSSVSSFERFEIFPKTSSWPN	QILRESGGIDKEAMGFTYSGIRTNG	100
	130	155	11	FEIFPKTSSWPNHDSNKGVTAACPH	MGFTYSGIRTNGATSACRRSGSSFY	83.3
	143	168	12	DSNKGVTAACPHAGAKSFYKNLIWL	TSACRRSGSSFYAEMKWLLSNTDNA	68.4
	156	181	13	GAKSFYKNLIWLVKKGNSYPKLSKS	EMKWLLSNTDNAAFPQMTKSYKNTR	70.6
	169	194	14	KKGNSYPKLSKSYINDKGKEVLVLW	FPQMTKSYKNTRKSPALIVWGIHHS	70
Low ADCC HA1	182	207	15 *	**INDKGKEVLVLWGIHHPSTSADQQS**	SPALIVWGIHHSVSTAEQTKLYGSG	86.7
	195	220	16	IHHPSTSADQQSLYQNADTYVFVGS	STAEQTKLYGSGNKLVTVGSSNYQQ	65
	208	233	17	YQNADTYVFVGSSRYSKKFKPEIAI	KLVTVGSSNYQQSFVPSPGARPQVN	64.3
	221	246	18	RYSKKFKPEIAIRPKVRDQEGRMNY	FVPSPGARPQVNGLSGRIDFHWLML	55
	234	259	19	PKVRDQEGRMNYYYWTLVEPGDKITF	LSGRIDFHWLMLNPNDTVTFSFNGA	77.8
High ADCC HA1	247	272	20 *	**WTLVEPGDKITFEATGNLVVPRYAF**	PNDTVTFSFNGAFIAPDRASFLRGK	50
	260	285	21	ATGNLVVPRYAFAMERNAGSGIIIS	IAPDRASFLRGKSMGIQSGVQVDAN	56.2
	273	298	22	MERNAGSGIIISDTPVHDCNTTCQT	MGIQSGVQVDANCEGDCYHSGGTII	46.2
	286	311	23	TPVHDCNTTCQTPKGAINTSLPFQN	EGDCYHSGGTIISNLPFQNIDSRAV	62.5
	299	324	24	KGAINTSLPFQNIHPITIGKCPKYV	NLPFQNIDSRAVGKCPRYVKQRSLL	78.9
	312	337	25	HPITIGKCPKYVKSTKLRLATGLRN	KCPRYVKQRSLLLATGMKNVPEIPK	78.9
	325	350	26	STKLRLATGLRNIPSIQSRGLFGAI	ATGMKNVPEIPKGRGLFGAIAGFIE	85
	338	363	27	PSIQSRGLFGAIAGFIEGGWTGMVD	RGLFGAIAGFIENGWEGLIDGWYGF	90
	351	376	28	GFIEGGWTGMVDGWYGYHHQNEQGS	GWEGLIDGWYGFRHQNAQGEGTAAD	84.2
	364	389	29	WYGYHHQNEQGSGYAADLKSTQNAI	HQNAQGEGTAADYKSTQSAIDQITG	80
	377	402	30	YAADLKSTQNAIDEITNKVNSVIEK	KSTQSAIDQITGKLNRLIEKTNQQF	90
	390	415	31	EITNKVNSVIEKMNTQFTAVGKEFN	LNRLIEKTNQQFELIDNEFNEVEKQ	65
	403	428	32	NTQFTAVGKEFNHLEKRIENLNKKV	LIDNEFNEVEKQIGNVINWTRDSIT	73.3
	416	441	33	LEKRIENLNKKVDDGFLDIWTYNAE	GNVINWTRDSITEVWSYNAELLVAM	75
	429	454	34	DGFLDIWTYNAELLVLLENERTLDY	VWSYNAELLVAMENQHTIDLADSEM	89.5
	442	467	35	LVLLENERTLDYHDSNVKNLYEKVR	NQHTIDLADSEMDKLYERVKRQLRE	70
	455	480	36	DSNVKNLYEKVRSQLKNNAKEIGNG	KLYERVKRQLRENAEEDGTGCFEIF	78.9
	468	493	37	QLKNNAKEIGNGCFEFYHKCDNTCM	AEEDGTGCFEIFHKCDDDCMASIRN	80
High ADCC HA2	481	506	38 *	**FEFYHKCDNTCMESVKNGTYDYPKY**	KCDDDCMASIRNNTYDHSKYREEAM	80
	494	519	39	SVKNGTYDYPKYSEEAKLNREEIDG	TYDHSKYREEAMQNRIQIDPVKLSS	73.7
	507	532	40	EEAKLNREEIDGVKLESTRIYQILA	NRIQIDPVKLSSGYKDVILWFSFGA	75
	520	545	41	KLESTRIYQILAIYSTVASSLVLVV	YKDVILWFSFGASCFILLAIVMGLV	60
	533	558	42	YSTVASSLVLVVSLGAISFWMCSNG	CFILLAIVMGLVFICVKNGNMRCTI	55.6
	546	571	43	LGAISFWMCSNGSLQCRICI	ICVKNGNMRCTICI	90
Negative	Scrambled (H1-20) *			**TKPRVFYLAITPEWNVEFVGLTDGA**		