Table S1. Sequence data and reactivity of antibodies from IgG+ memory B cells from healthy donor VB

Ig	HEAVY									LIGHT				REACTIVITY											
gmVB	VH	D	RF	JH	V-Mut.	CDR3 (aa)	(+)	Length	Subclass	Vκ	Jκ	V-Mut.	CDR3 (aa)	ssDNA	dsDNA	LPS	insulin	HEp2	S. aur	S.pyo	S.pneu	E.fae	E.coli	Pn-Vax	PedHIB	Meno
VB1	4-59	6-13	2	4	17	GSGSRAAVPDY	1	11	IgG1	4-1	3	2	QQYYTSSSFT	+	+	+	+	+	+	+	+	+	+	+	+	+
VB4	4-39	/	/	2	27	HERKGHTWYFDL	4	12	IgG1	3-11	3	15	QMRNYWPPVFT	+	+	+	+	+	+	+	+	+	+	+	+	+
VB7#	3-74	/	/	4/5	28	DQSVAGKTTQDF	1	12	IgG2	3-15	1	11	QQYNNWWT													
VB10#	4-31*	2-21	2	4	35	ETTLVQVGGDCYSGPFDY	0	18	IgG2	4-1	3	14	QQYYSART													
VB11#	4-34	2-2	2	5	27	NCSSSSCYGDS	0	11	IgG4	2-28	2	8	MQALQTPYT													
VB23#	4-31*	/	/	5	19	ELSFSSGHPPRWFDP	2	15	IgG1	1-5*	1	10	QQYNTYSRT													
VB26#	3-30	3-22	2	4	22	DFYYYDSRGYSRTLRHFES	4	19	IgG1	1-13	4	19	QQFDDFQLT													
VB34	3-30	1-26	1	3	24	AVEWEILEPRNNPFDL	1	16	IgG1	3-20	2	14	QLYGDSPYP	/	/	/	/	/	/	/	/	/	/	/	+	/
VB41#	3-15	4-23	1	4	17	DHEFLRSHFDT	3	11	IgG1	3-20	3	8	QQYGSSPLFT													
VB50	3-11	1-26	3	4	15	DRRGIVGVSDY	2	11	IgG1	1-5*	1	2	QQYTSYTRT	/	/	/	/	+	+	+	+	+	/	+	+	+
VB52	3-53	/	/	6	18	DGHAGGSYFYYYGMDV	1	16	IgG1	1-39	3	6	QQTYSTPRT	/	/	/	/	/	/	/	/	/	/	/	/	/
VB54#	3-23	/	/	2	ND	DEGGRSKLARIRLLSGYLDL	4	20	IgG1	3-20	1	9	QQYGSYWWT													
VB56	3-7*	/	/	6	7	DFYTPSTNYYYYGMDV	0	16	IgG1	3-15	1	0	QQYNNWPPST	/	/	/	/	/	/	/	/	/	/	/	/	/
VB57	4-31*	3-3	2	4	15	HGAGYYDY	1	8	IgG3	3-20	1	8	QQYGHSHTWT	/	/	/	/	+	/	/	+	/	/	+	/	/
VB58#	4-31*	4-17	2	4	28	DRRVDYGDFGLDR	3	13	IgG1	1-5*	2	11	QHYNN?ST													
VB60	3-11	3-10	1	4	12	VGRWFGELIYAADN	1	14	IgG1	3-15	4	4	QQYNNWPPGPLT	/	/	/	/	+	/	/	/	/	/	/	/	/
VB65	3-74	2-15	2	6	14	VRGTTTSLMYSYGMDV	1	16	IgG4	1-39	2	13	QQSYKTPYT	/	/	/	/	/	/	/	/	/	/	/	/	/
VB68#	5-51	/	/	5	31	HESAMAEFDS	1	10	IgG1	1-5	4	11	QKYDSYSLT													
VB72	3-30	3-10	2	4	8	GRGYYGSGTYYKPQGLDC	2	18	IgG1	2-28	1	10	MQALQSPWT	+	+	+	+	+	+	+	+	+	+	+	+	+
VB78#	4-31*	2-2	1	4	21	ILVVPGAPFGFFDI	0	14	IgG2	3-20	2	9	QQYGSSLMYT													
VB83	4-34	3-22	2	3	22	ARYSSGYYVPAEI	1	13	IgG1	1-39	3	14	LQSYVNPFT	/	/	/	/	+	/	/	/	/	/	/	/	/
VB86	3-33	3-9	1	6	22	DAGYFDWRNIYYRNGLDV	2	18	IgG3	1-17	2	5	LQHSSPFT	/	/	/	/	+	+	+	+	+	/	+	+	/
VB92#	1-24	3-22	2	4	8	ASPTYDGNDFTGKVFDS	1	17	IgG1	1-39	2	5	QQSYSTPYT													
VB110	4-61	/	/	3	22	NRSSEVSFDI	1	10	IgG4	4-1	2	11	QQYHSIPYT	/	/	/	/	/	/	/	/	/	/	/	/	/
VB111	3-48	2-21	3	4	8	DRVVGIFDH	2	9	IgG1	4-1	1	2	QQYYSIPWT	/	/	/	/	+	/	/	/	/	/	/	/	/
VB114#	3-74	/	/	4	13	HGGNTAFVVDF	1	10	IgG1	3-20	1	11	QHYGSSEGT													
VB120#	3-49	3-3	2	4	7	NYDFWSGFDFDY	0	12	IgG1	1-39	1	10	QQTHSAPRT													
VB121#	3-7*	5-12	2	3	31	DQDYERNGIYYDAFDV	1	16	IgG3	1-6	1	25	LQDYTYPRT													
VB126	4-39	/	/	5	34	HVLVDDPNWFDP	1	12	IgG2	3D-15	3	9	QHYNRWPPGIT	+	+	+	+	+	+	+	+	+	+	+	+	+
VB129	3-23	1-26	2	4	27	TSNWGARSYFDY	1	12	IgG1	1-39	5	13	QHSYIYTPIT	/	/	/	/	/	/	/	/	/	/	/	+	+
VB132	3-23	3-22	2	3	15	TYYYDNSG	0	8	IgG2	1-5*	4	9	QHYSTYPLT	+	+	+	+	+	+	+	+	+	+	+	+	+
VB137	3-30	5-12	2	1	31	DVGGIGYSYEGLH	1	13	IgG1	1-5	1	27	QHYNTYPWT	/	/	/	/	+	/	+	/	+	/	/	+	+
VB139#	5-51	/	/	4	22	HGAMSAPSSFFDF	1	13	IgG1	4-1	3	19	QQYFRPPFT													
VB140	3-21	3-22	2	2	18	ANHYDRGYWYFDL	2	13	IgG1	3-15	4	7	QQYDHWPLT	/	/	/	/	+	/	/	/	/	/	/	+	/
VB142	3-33	1-7	2	5	22	GPQYNWNWNWFDS	0	13	IgG1	4-1	5	4	QQCVSNPFT	+	+	+	+	+	+	+	+	+	+	+	+	/
VB148	3-33	6-19	2	2	9	GRINNSGWYLARWYFDL	2	17	IgG2	1-16	5	10	LQYNSYPPT	+	+	+	+	+	+	+	+	+	+	+	/	+
VB155	5-51	6-19	3	4/5	35	LFPGVAVAGI	0	10	IgG1	3-20	1	7	QQYGSSPRT	+	+	+	+	+	+	+	+	+	+	+	+	+
VB161	4-61	3-22	2	5	35	GSYSFDSSGRSTDNNWFDP	1	19	IgG1	3-11	2	11	QHRSDWPPMFT	/	/	/	/	/	/	/	/	/	/	/	/	/
VB162	3-48	3-22	2	3	22	DLLPFTMIVAVESGFDI	0	17	IgG1	3-11	4	9	QQRSTWPPFT	/	/	/	/	+	/	/	/	/	/	/	/	/
VB165	3-30	1-7	2	4	12	EWDEHSRNYDYFDY	2	14	IgG1	3-20	1	6	QQYGSSWT	/	/	/	/	+	/	+	/	/	/	/	/	/
VB168	5-51	/	/	4	8	GTPIYDGYDPTAWSFDF	0	17	IgG1	1-39	5	6	QQSYGTLL	/	/	/	/	/	/	/	/	/	/	/	/	/
VB171#	3-33	6-19	2	2	9	GRINNSGWYLARWYFDL	2	17	IgG2	3-20	2	7	QHYGSSPYT													
VB174	3-72	/	/	5	20	LCGHCAFGY	1	9	IgG2	1-17	4	13	LQHSSYPLT	/	/	/	/	/	/	/	/	/	/	/	/	/
VB176	3-74	2-21	2	4	14	ACDAAGTAILD	0	11	IgG2	3-20	1	5	QQFTASRGT	/	/	/	/	/	/	/	/	/	/	/	+	+
VB179#	3-23	3-3	1	4	15	DGDIRFLERPIDY	2	13	IgG1	1-17	4	6	LQHDSYPLT													
gmVB	VH	D	RF	JH	V-Mut.	CDR3 (aa)	(+)	Length	Subclass	Vλ	Jλ	V-Mut.	CDR3 (aa)	ssDNA	dsDNA	LPS	insulin	HEp2	S. aur	S.pyo	S.pneu	E.fae	E.coli	Pn-Vax	PedHIB	Meno
VB13	5-51	/	/	4	24	LTDH	1	4	IgG1	7-43	3	12	LLFSGGAQLWV	+	+	+	+	+	+	+	+	+	+	+	+	+
VB18	1-46	6-13	2	4	17	ADSSSLKSAAPAFY	1	14	IgG1	1-51	2	5	GAWDSSLSVV	/	/	/	/	/	/	/	/	/	/	/	/	/
VB28	3-23	2-15	3	4	17	EVAEVGNPLFDH	1	12	IgG1	2-11	3	6	SSYAGSCL	/	/	/	/	+	/	/	/	/	/	/	/	/
VB43	1-69*	2-2	2	6	11	GRFGYCSGTSCYNYYGMDV	1	19	IgG3	2-11	3	10	CLYANSYTFEV	+	+	+	+	+	/	/	/	/	/	/	+	+
VB45	3-21	3-10	2	6	11	PDYGSGGNYYYYYGMDV	0	17	IgG3	2-14	1	3	RSYTNNSTLV	/	/	/	/	/	/	+	/	+	/	/	/	/
VB53	5-51	/	/	4	19	SVAGGTFDY	0	9	IgG1	2-14	3	12	SSYTTSDTWV	/	/	/	/	+	/	+	/	/	/	/	/	/
VB70	4-59	3-22	2	3	18	ERRYYLDSSGFYSFDDAFDI	2	20	IgG1	1-44	3	9	AVWDDSRNGPV	/	/	/	/	+	+	+	/	+	/	/	/	/
VB73#	3-53	/	/	1	19	WW	0	2	IgG2	7-46*	3	15	SLSYSGTQV													
VB75	3-21	1-1	2	6	8	DTRLWDNWNVPNSYNYYYYYGLDV	1	24	IgG3	2-14	3	6	SSYTSSSIPGV	/	/	/	/	+	/	+	/	/	/	/	/	/
VB90#	3-21	/	/	4	14	DPDHARPIDY	2	10	IgG2	4-69	3	8	QTWAPGMGV													
VB101	3-23	/	/	6	15	VMTPRGGMDV	1	10	IgG2	1-51	3	5	GTWDNSLNGRV	/	/	/	/	/	/	/	/	/	/	/	/	/
VB102	4-31*	3-16	1	4	21	VGLVIPLATEYYFDY	0	15	IgG1	2-11	3	8	CSYAGSFIYWV	/	/	/	/	+	+	/	/	+	+	/	+	+
VB107#	5-51	/	/	6	12	RGISPYYYGLDV	1	12	IgG1	1-47	3	ND	AAWDNNLNGPV													
VB108	3-64	3-9	1	4	25	DRGTVIRDFDS	2	11	IgG2	7-43	2	11	LLYYGDAV	/	/	/	/	+	/	/	/	/	/	/	/	/
VB117#	4-28	2-21	2	5	23	DLYKSACDCGWFDP	1	14	IgG1	2-23	2	6	CSYAGNVV													
VB138	3-7*	/	/	4	19	SFWNIQNDY	0	9	IgG2	7-46*	3	8	LLSYYGARV	/	/	/	/	/	/	/	/	/	/	/	/	/
VB157	3-30	3-9	2	3	9	DEPYESTGYQNGFDI	0	15	IgG3	3-1	2	6	QAWDSSSVV	/	/	/	/	/	/	/	/	/	/	/	/	/
VB164	3-7*	6-13	2	1	16	EDFYSWYD	0	8	IgG1	1-51	2	5	ATWDSAKL	/	/	/	/	/	/	/	/	/	/	/	/	/
VB173	3-21	3-22	2	6	20	EDRSGHYYGFDV	2	12	IgG2	1-47	2	5	AAWDDSRSAVV	/	/	/	/	/	+	+	+	+	+	+	/	+

#, antibody was not expressed/tested; *, polymorphic allelles; RF, D gene reading frame; V-Mut., number of mutations within V region; (+), positive charges in IgH CDR3; +, reactive in ELISA;
/, nonreactive in ELISA; ND, not determined, S. aur, Staphylococcus aureus (protein A-); S. pyo, Streptococcus pyogenes; E. fae, Enterococcus faecalis; E.coli, Escherichia coli;
Pn-Vax, Pneumovax23; PedHIB, PedvaxHIB; Meno, Menomune

Table S2. Sequence data and reactivity of antibodies from IgG+ memory B cells from healthy donor PN

Ig	HEAVY								LIGHT					REACTIVITY											
gmPN	VH	D	RF	JH	V-Mut.	CDR3 (aa)	(+)	Length	Subclass	Vκ	Jκ	V-Mut.	CDR3 (aa)	Length	ssDNA	dsDNA	LPS	insulin	HEp2	S. aur	S.pyo	S.pneu	E.fae	E.coli	Pn-Vax	PedHIB	Meno
PN1	1-46	5-12	3	4	0	DISNIVAFDY	0	10	IgG1	3-15	1	0	QQYNNWPPAT	10	/	/	/	/	+	/	/	/	/	/	/	+	+
PN2#	3-7	6-19	2	6	27	GDYGSGYFRHFYGMDV	2	16	IgG3	1-5*	1	14	QQYNSFSWT	9													
PN4	5-51	1-26	1	3	11	HAPWESPIRSRAFDI	3	15	IgG1	1-9	1	3	QQLNSYPPWT	10	+	+	+	+	+	+	+	+	+	/	/	+	+
PN8	4-59	4-23	2	1	13	GDDYGVPFQH	1	10	IgG2	4-1	2	7	QQYYSNPRT	9	+	+	+	+	+	+	+	+	+	+	+	+	+
PN13	3-43	/	/	5	24	DLGHRLGGWTLES	2	13	IgG1	2-28	4	7	MQALQTALI	9	/	/	/	/	/	/	/	/	/	/	/	/	/
PN16	4-4	3-22	2	5	17	DARGYDSSEFDS	1	12	IgG1	1-39	2	9	QHSYSTPPT	9	+	+	+	+	+	+	+	+	+	+	/	+	+
PN30	1-46	3-9	2	1	12	TGSYNSNRMTAEYLQH	2	16	IgG1	1-5*	2	2	QQYYSYSQYT	10	+	+	+	+	+	+	+	+	+	+	/	+	/
PN33	4-34	2-15	2	2	19	EGYCGGGGCYGLWYFDL	0	17	IgG1	3-11	4	21	QQRNNWIT	8	/	/	/	/	+	+	+	+	+	+	+	+	+
PN40#	3-48	/	/	4	46	TSSFGGKKYIDY	2	12	IgG3	1-16	1	18	QQYDSYPWT	9													
PN46	4-34	3-10	2	5	22	RPYYYGSGTGWS	1	12	IgG2	3-20	4	8	QQYDNSPFT	9	+	+	+	+	/	+	+	+	+	+	+	/	+
PN49#	3-48	1-26	3	4	3	LIVGATTRSFDS	1	12	IgG1	1-39	1	4	QQSYSTPPWT	10													
PN52	3-23	4-17	2	4	20	DGPVYGGSFTRAPYYFDS	1	18	IgG2	4-1	4	14	QQYWSTPLT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
PN53#	3-23	2-2	3	5	21	VVSDVIVIPAARGFDS	1	16	IgG1	3-11	5	8	QQGSIWPIT	9													
PN54	4-59	/	/	4	13	DSHGTNFFDY	1	10	IgG2	1-12	2	9	QQANSFPYT	9	/	/	/	/	+	+	/	+	/	/	+	/	+
PN56	3-23	3-3	2	4	11	AFDLWSGWPFAY	0	12	IgG1	3-20	5	5	QQYDSSPIT	9	+	+	+	+	+	+	+	+	+	+	+	+	+
PN60	3-7	6-19	2	4	13	GWGWLPD	0	7	IgG2	3-20	3	19	QQYAISPIT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
PN64	3-23	3-3	2	6	12	EGGITIEGYYYFSMDV	0	16	IgG1	3-20	2	6	QQYGSSPRYT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
PN73	1-18	2-2	2	5	14	EGDCSSTSCRLVDS	1	14	IgG3	1-39	1	7	QQSYSFPRT	9	/	/	/	/	+	/	/	/	/	/	/	/	/
PN75	5-51	3-22	2	4	17	HSGGPAYYFSSDSYYHWDY	2	19	IgG1	3-15	3	14	QQYNNWPPGGT	11	/	/	/	/	/	/	/	/	/	/	/	/	/
PN76#	4-59	6-19	2	6	13	DSSGWGGYYVYGLGV	0	15	IgG1	1-27	4	7	QKYNSAPLT	9													
PN79	1-46	2-2	3	4	17	GGPAASFGMGRGVTFDL	1	17	IgG2	1-5*	4	8	QQYNSYPLT	9	/	/	/	/	/	+	/	+	/	/	+	/	/
PN83#	3-23	3-3	1	6	14	DPQGEWLFGDGMDV	0	14	IgG1	3-11	5	4	QQRSNWPPSIT	11													
PN84	3-23	/	/	5	24	RDSAPGDRALDS	2	12	IgG1	1-5*	2	8	QQYHNYLMYT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
PN87	4-39	/	/	4	19	LVAHTSIDY	1	9	IgG1	1-5*	1	14	QQYTSYFWT	9	/	/	/	/	+	/	/	/	/	/	/	/	/
PN89	3-74	3-9	2	6	17	LGFPSQRHDILTGHYLDGMDV	3	21	IgG1	2-30	1	3	MQGTHWPPWT	10	+	+	+	+	+	+	+	+	+	+	+	+	+
PN102	3-7	/	/	4	18	GGFFFNY	0	7	IgG2	3-20	1	17	QQYGSAPRT	9	+	+	+	+	+	+	/	+	+	/	+	+	/
PN116	4-34	/	/	3	25	GGGGFDV	0	7	IgG1	1-39	1	14	QQSYTTPWT	9	/	/	/	/	/	/	+	/	/	/	/	/	/
PN117#	3-33	3-3	1	4	41	GGQKFTMFGERFYGQDY	2	17	IgG1	1-39	4	15	QQSYRAPLT	9													
PN119	1-69*	2-21	3	6	23	DLQGYVTVTAMDV	0	13	IgG1	1-5*	1	10	QHYNSYFGT	9	/	/	/	/	+	+	/	/	/	/	/	+	/
PN120#	1-69	6-19	3	4	20	SHVAVAGMTYYFDY	1	14	IgG1	1-27	1	13	QNYNSALVT	9													
PN123	1-46	1-7	3	4	17	GTGTLGGHFDY	1	11	IgG1	3-11	3	7	QQRSNWPPRIT	11	/	/	/	/	+	/	+	+	/	+	+	+	+
PN138	3-7	/	/	2	9	GFGHFDL	1	7	IgG1	1-39	1	11	QQTYSTPPLT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
PN140#	1-8	3-10	2	6	27	GPRVWKRGGQYDDYGMDV	3	18	IgG1	3-20	4	12	QQYSSSPLT	9													
PN147#	4-59	2-15	2	4	8	HRSSGSHY	3	8	IgG1	2D-30	1	0	MQGTHWPPVT	10													
PN148	4-34	5-24	2	4	23	ARTDGNLDH	2	9	IgG1	2-28	2	13	MQALRTPYT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
PN156	1-69	3-16	2	5	19	DFWGRVSCKGTTCYPHSTE	3	19	IgG1	2-28	1	2	MQALQTPQT	9	+	+	+	+	+	/	/	/	/	/	/	+	+
PN157	4-39	3-22	2	4	11	HLVSPYFSDSSGYPFDS	0	17	IgG1	3-20	2	7	QQYGSSPKS	9	/	/	/	/	/	/	/	/	/	/	/	/	/
PN158	3-9	6-19	2	6	3	DSNSGWLYYLYYYGMDV	0	17	IgG1	1-17	5	7	LQLNSYPLT	9	/	/	/	/	+	/	+	/	/	/	/	/	/
PN162	1-69*	3-22	2	4	28	GMHDSSSFYPTQNFDY	1	16	IgG1	3-11	4	11	QQRSNWPLT	9	/	/	/	/	+	/	/	+	/	/	+	/	/
PN164	1-69*	5-24	2	3	29	DPAGGEGYSPPIRAAFDI	1	18	IgG1	3-11	4	10	QQRGNWPLT	9	/	/	/	/	+	/	/	/	/	/	/	/	/
PN167	1-69*	/	/	4	26	GWGLDYFDL	0	9	IgG1	1-6	4	11	LQDFIYPLT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
PN169	3-13	2-2	2	6	19	CSSRNCPYYYYGMDV	1	15	IgG1	1-9	4	7	QQLYNYPIV	9	/	/	/	/	/	/	+	/	/	/	/	/	/
PN171	1-2	6-25	2	4	21	QRLYYFDS	1	8	IgG2	3-20	2	7	QQYGSSLMYT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
PN175	1-46	/	/	4	7	DRARFFDPTGRFDF	3	14	IgG2	1-9	1	16	QQYYSTPGGT	10	/	/	/	/	/	/	/	/	/	/	/	+	+
PN182	4-4	/	/	6	19	EGRNYYNGMDV	1	11	IgG1	1-39	3	7	QQTYSLAT	8	/	/	/	/	/	/	+	+	/	/	/	/	/
PN184	4-39	6-19	2	3	13	GPRTYYADNSGLDDVFDI	1	18	IgG2	1-5	4	19	QQYHTYTT	8	/	/	/	/	/	/	/	/	/	/	/	/	/
PN187	3-9	5-5/5-18	2	5	19	STVRRGYMYNYRLLGWFDP	3	19	IgG2	3-11	2	8	QQRGNWPPT	9	+	+	+	+	+	+	+	+	+	+	+	+	+
PN189	3-11	/	/	6	9	GVWGAYYYYYGMDV	0	14	IgG1	1-5*	1	5	QQSNSYPWT	9	/	/	/	/	/	/	/	/	+	/	/	/	/
PN191	3-15	/	/	4	27	DDYRNRHPHTLYDPFDN	4	17	IgG2	1-13	3	21	QQYDSSPPNT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
gmPN	VH	D	RF	JH	V-Mut.	CDR3 (aa)	(+)	Length	Subclass	Vλ	Jλ	V-Mut.	CDR3 (aa)	Length	ssDNA	dsDNA	LPS	insulin	HEp2	S. aur	S.pyo	S.pneu	E.fae	E.coli	Pn-Vax	PedHIB	Meno
PN7	3-74	1-7	3	4	9	RVTGTTSDFDY	1	11	IgG1	7-46	2	5	LLSYSGTRV	9	+	+	+	+	+	+	/	/	/	/	+	+	+
PN14	4-4	3-10	2	4	13	EGYYGSGSQSRFDY	1	14	IgG1	1-40	2	5	QSFDSSVSGSYVV	13	/	/	/	/	+	+	/	+	/	+	+	/	+
PN18#	3-23	3-3	2	4	12	DYDFWSGPPSAFDY	0	14	IgG2	2-14	2	2	SSYTISSTRA	10													
PN42	3-7	1-26	2	3	11	PYSGNFIAFDI	0	11	IgG2	2-8	2	3	SSYAGAAGSNNLV	13	/	/	/	/	+	/	/	/	/	/	/	/	/
PN51	5-51	5-12	2	5	7	QGYSGRGANWFDP	1	13	IgG1	3-21	3	9	QVWSSSEHPV	10	/	/	/	/	/	/	/	/	/	/	/	/	/
PN57	4-34	3-3	2	4	27	GRGIVLETSIEDIHFDV	2	17	IgG2	1-40	2	14	QSYDSSLTGLV	11	/	/	/	/	/	/	/	/	/	/	/	/	/
PN58	4-31*	3-3	2	6	4	DLVDFGVVPCGMDV	0	14	IgG1	7-43	2	3	LLYYGGAQRV	10	/	/	/	/	+	+	+	+	+	+	+	+	+
PN67	4-59	5-12	2	5	22	DRERGYSGYGHLDP	3	14	IgG1	1-47	1	10	ASWDDSLSGLYV	12	/	/	/	/	/	/	/	/	/	/	/	/	/
PN69	1-8	2-8	2	4	17	GRGYCTNGVCYGATKYFDY	2	19	IgG2	2-14	2	8	SSYTTNVI	8	/	/	/	/	/	/	/	/	/	/	/	/	/
PN88	3-15	2-2	3	6	15	TSPPDTVIVPAAMHYYYYGMDV	1	22	IgG1	1-51	1	11	GTWDSSLTAHYV	12	/	/	/	/	/	/	+	+	/	/	+	/	+
PN107	3-7	1-1	2	3	21	DNWGQGVRDGFDV	1	13	IgG1	1-40	3	13	QSYDSRLRNWV	11	+	/	+	+	+	+	/	+	+	+	/	+	+
PN115	3-7	3-3	2	6	25	DYDFWSGYSYYYYGMDV	0	17	IgG1	1-51	3	9	GTWDSSLSVRV	11	/	/	/	/	/	/	/	/	/	/	/	/	/
PN131	3-21	3-10	2	6	20	TVGASGRASHGMDV	2	14	IgG1	3-21	2	16	QVWDSSRDQWV	11	/	/	/	/	/	/	/	/	/	/	/	/	/
PN134#	1-2	3-22	2	4	14	GPGSTDYYYNPSGLKFDY	1	18	IgG3	1-40	2	6	QSYDSTLSGVV	11													
PN139	3-33	/	/	4	10	GLAEAFDH	1	8	IgG1	3-21	3	6	QVWDRIANHPGKNWV	15	/	/	/	/	+	/	/	/	/	/	/	/	/
PN153	3-9	/	/	6	8	SLRRYYYYGMDV	2	12	IgG1	1-40	3	5	QSYDSTLSGWGV	12	/	/	/	/	/	/	/	/	/	/	/	/	/
PN161	3-74	2-21	2	3	16	IIGAYCGGDCSTRTPDAFDI	1	20	IgG1	3-21	1	8	QVWDNSSEQVV	11	/	/	/	/	/	/	/	/	/	/	/	/	/
PN192#	3-21	2-8	2	4	10	VPTPQVLGYCTSGVCYFDY	0	19	ND	1-44	3	10	AAWDDSLNGWV	11													

#, antibody was not expressed/tested; *, polymorphic allelles; RF, D gene reading frame; V-Mut., number of mutations within V region; (+), positive charges in IgH CDR3; +, reactive in ELISA;
/, nonreactive in ELISA; ND, not determined, S. aur, Staphylococcus aureus (protein A-); S. pyo, Streptococcus pyogenes; E. fae, Enterococcus faecalis; E.coli, Escherichia coli;
Pn-Vax, Pneumovax23; PedHIB, PedvaxHIB; Meno, Menomune

Table S3. Sequence data and reactivity of antibodies from IgG+ memory B cells from healthy donor HW.

Ig	HEAVY								LIGHT					REACTIVITY											
gmHW	VH	D	RF	JH	V-Mut.	CDR3 (aa)	(+)	Length	Subclass	Vκ	Jκ	V-Mut.	CDR3 (aa)	Length	ssDNA	dsDNA	LPS	insulin	HEp2	S. aur	S.pyo	S.pneu	E.fae	E.coli	Pn-Vax	PedHIB	Meno
HW 106#	4-61	5-12	2	5	25	LQASGYDYAPYWFDH	1	15	IgG1	4-1	1	21	QQYYTTPPT	9													
HW 120	4-31	4-23	2	4	26	ELLATGGKGFDY	1	12	IgG3	3-15	2	13	HQYNWPPTYT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 149	3-21	/	/	4	16	GYFDY	0	5	IgG3	1-6	1	6	LQDYNYPRT	9	/	/	/	/	/	/	+	/	/	/	/	/	/
HW 154	3-53	/	/	4	13	DPGDLDTLDF	0	10	IgG2	3-15	5	13	QQYNNWPPIT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 156	3-7	/	/	4	18	RVEPTVKSFDY	1	11	IgG2	3-15	5	10	QQYNKWPPLT	10	/	/	/	/	/	/	+	+	/	/	+	/	/
HW 161	3-74	1-26	2	4	10	LISGTYFRYYDY	1	12	IgG3	3-15	2	1	QQYNNWPPVT	10	+	+	+	+	+	+	+	+	+	+	+	+	+
HW 168	4-39	3-19	3	6	20	HRMMTLGGVLDYYYYGMDI	2	19	IgG1	3-15	3	7	QQYNNWPHFT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 169	1-18	2-15	2	4	17	ACSGGSCYSELPDY	0	14	IgG1	3-15	2	1	QQYNNWPPYT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 175	1-18	3-10	3	4	20	HLVRGVINRSFDS	3	13	IgG3	3-20	1	10	QQYGTSPWT	9	+	+	+	+	+	+	+	+	+	+	+	+	+
HW 209#	4-39	3-22	3	4	19	GAITMIKVATHFDY	2	14	IgG1	3-15	3	6	QHYNNWPT	8													
HW 221	3-74	/	/	5	14	GWAATTYYPF	0	10	IgG1	3-20	4	3	QQYGSSPLT	9	/	+	+	+	+	+	/	/	+	+	/	+	+
HW 224	3-15	/	/	3	28	GWKGSFDM	1	8	IgG2	4-1	2	13	QQYYSTPYT	9	/	/	/	/	/	+	/	/	/	/	/	/	/
HW 230	3-7	5-12	2	1	8	DSEYSSSWYNRFHH	3	14	IgG1	3-15	4	6	QQYNDWPPLT	10	/	/	/	/	/	+	+	+	/	/	+	/	/
HW 247	3-9	3-22	2	3	13	GFFDSGGYWDAFDI	0	14	IgG1	3-20	2	7	QQYGNSHT	8	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 266	3-9	6-13	3	2	31	ASLTAAAIMGYFDL	0	14	IgG2	1-5*	4	8	QQYSTSSALT	10	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 285	3-33	6-19	2	4	9	DISGWSLSNNFDY	0	13	IgG1	1D-39	2	7	QQSYSSPYT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 290	3-15	/	/	4	9	ESYGPFDF	0	8	IgG1	1-5*	1	6	QQYNSYSGT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 307	4-39	3-22	2	4	24	ENYYDMSGYYPAPRPAFFDS	1	20	IgG1	1D-39	1	17	QQSYSIPRT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 311	4-59	1-20	2	6	33	GPRVSAWNRDLQRLTFHYIGLDL	4	22	IgG1	3-20	1	21	HQYGSSPLT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 326	3-7	6-13	3	4	25	NKIPAADCLDY	1	11	IgG2	1-5*	1	11	QQFPGWV	7	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 329	4-34	3-9	2	3	30	ASAYYDILTGYSLDAFDI	0	18	IgG2	3-20	2	6	QHYGSSPPRYT	11	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 337	4-34	2-15	2	4	18	GLYPGYCSGDICYSGPMGY	0	19	IgG1	3-20	1	11	QQYGTSPHRT	10	+	+	+	+	/	ND	ND	ND	ND	ND	ND	ND	ND
HW 352	1-3*	3-10	3	4	35	DHDGNVRGVVPNYFFDY	2	17	IgG4	3-20	4	20	QQYGTSPLT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 376	4-28	/	/	5	46	YDKSIRPFDS	2	10	IgG2	3-20	2	21	LQSHASPFT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 378	1-46	3-22	2	4	15	SYYYDSSRGIDF	1	12	IgG1	1-27	1	6	QKCNFAPWT	9	/	/	/	/	+	/	/	/	/	/	/	/	/
HW 386#	3-30	5-24	3	5	12	TWGRITMGRFDP	1	12	IgG1	1D-39	2	12	QQSYRASYT	9													
HW 387	1-46	3-9	1	3	16	DPTDEILASNDWFPRGGPFDM	1	21	IgG1	3-20	4	7	QQYGVSLVT	9	/	/	/	/	/	/	/	/	/	/	/	/	/
gmHW	VH	D	RF	JH	V-Mut.	CDR3 (aa)	(+)	Length	Subclass	Vλ	Jλ	V-Mut.	CDR3 (aa)	Length	ssDNA	dsDNA	LPS	insulin	HEp2	S. aur	S.pyo	S.pneu	E.fae	E.coli	Pn-Vax	PedHIB	Meno
HW 101#	1-18	/	/	4	24	YLGDGNYFDY	1	10	IgG1	2-23*	2	5	CSYAGRSTLI	10													
HW 109	3-30	3-10	2	5	20	CGDYYGSGTYPNWFDP	1	16	IgG2	2-11	1	10	CSYAGSYTFV	10	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 124	3-7	/	/	4	21	DQASGKYDY	1	9	IgG2	1-40	1	6	QSHDRSLNAYV	11	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 157#	3-23	3-10	3	5	25	GAPGILVRGVIRVTPFDS	1	18	IgG2	7-43	3	14	LLNFDNYVV	9													
HW 158	3-11	6-19	2	5	15	VWCSGWCPREFYRLDS	2	16	IgG1	2-14	2	12	TSYTSSGTFVV	11	/	/	/	/	/	+	+	+	+	/	/	/	+
HW 174	7-81	6-13	2	6	9	THRLYNNSWFPLVYDMDV	2	18	IgG1	2-14*	1	3	SSYTTTSTYV	10	+	+	+	+	+	+	+	+	+	+	+	+	+
HW 177	5-51	2-15	2	1	21	LVRDCSGGSCYSPPEKPHFQN	3	21	IgG1	1-47*	3	11	ATWDDSLSTSWL	12	/	/	+	/	+	+	+	+	+	+	+	+	+
HW 181	1-46	/	/	4	27	DNGKWAFDY	1	9	IgG2	2-14*	3	8	CSFTRSDAWV	10	/	/	/	/	/	/	+	/	/	/	/	/	/
HW 182	4-39	/	/	4	13	PGTTWPHYYFDY	1	12	IgG2	2-14*	2	8	SSYTSSSSVV	10	/	/	/	/	/	/	/	/	/	/	/	/	+
HW 205	1-69	3-22	2	6	23	VLYDRYSWFYYYYYALDV	1	18	IgG1	2-11	2	21	CSYTDTVA	8	+	+	+	+	+	+	+	+	+	+	+	+	+
HW 225	3-30	4-17	2	5	9	DRDYGDPPNNWFDP	1	14	IgG1	1-40	3	4	QSYDSSLSGWV	11	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 231	3-21	6-13	1	2	25	GGGEQQLPDYWYFDL	0	15	IgG1	1-51*	1	6	GTWDSSLSTGLYV	13	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 237	3-48	2-15	2	5	14	LLGYCSGGSCP	0	11	IgG1	1-47*	2	1	AAWDDSLSGPVV	12	/	/	/	/	+	+	+	+	/	+	/	+	+
HW 248	3-21	/	/	5	20	VEGGLGDWYRN	1	11	IgG1	1-40	2	11	QSYDTSLSGFVI	12	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 251	3-30	/	/	4	18	GPATETPKIDY	1	11	IgG2	1-51	1	3	GTWDSSLSAHV	11	/	/	/	/	+	/	+	+	/	/	/	/	/
HW 259	1-46	2-21	3	4	13	GAGQGVVTTCND	0	12	IgG2	2-11	1	3	CSYAGSYTLV	10	/	/	/	/	+	/	/	/	/	/	/	/	+
HW 296	3-21	5-18	3	5	4	ADTAMINWFDP	0	11	IgG1	2-14*	3	1	SSHTSSSTRV	10	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 313	3-33	3-9	2	6	10	VYDFWSGYYGYYYGMDV	0	17	IgG3	2-23*	3	8	CSYATSSTLV	10	/	/	/	/	/	/	/	/	/	/	/	/	/
HW 327#	3-9	1-26	2	4	8	DTYSGVTAFDY	0	11	IgG1	2-14*	3	8	SSYTSSYTLV	10													
HW 330	3-15	6-13	2	4	10	PYSASWYSDY	0	10	IgG1	1-40	2	6	QSCDSRLCPNVV	12	+	+	+	+	+	+	+	+	+	+	+	+	+
HW 338#	3-21	4-17	3	4	20	DPTTNMGWDFDY	0	12	IgG1	1-51	2	9	GTWDNSLSGVV	11													
HW 345	4-39	5-18	2	3	25	FGGYSYPYVSAFDV	0	14	IgG2	1-51*	2	7	GTWDFRLYTGVL	12	+	+	+	+	+	+	+	+	+	+	+	+	+
HW 355	3-73	6-25	2	4	18	HAASGRDC	2	8	IgG1	6-57	3	9	QSYDSSSHWV	10	+	+	+	+	+	+	+	+	+	+	+	+	+
HW 357#	3-33	3-10	3	6	3	DQPRITMVRGVPQIYCYYVMDV	2	21	IgG1	1-51	2	4	GTWDSSLSAGGV	12													
HW 360	1-46	3-3	2	6	6	GMNYDFWSGPWAIYYYYGMDV	0	21	IgG1	2-14*	1	2	NSYTSSTTLV	10	+	+	+	+	+	+	+	+	+	+	+	+	+

#, antibody was not expressed/tested; *, polymorphic allelles; RF, D gene reading frame; V-Mut., number of mutations within V region; (+), positive charges in IgH CDR3; +, reactive in ELISA;
/, nonreactive in ELISA; ND, not determined, S. aur, Staphylococcus aureus (protein A-); S. pyo, Streptococcus pyogenes; E. fae, Enterococcus faecalis; E.coli, Escherichia coli;
Pn-Vax, Pneumovax23; PedHIB, PedvaxHIB; Meno, Menomune

Table S4. Sequences and reactivity of reverted antibodies from IgG+ memory B cells

Ig	HEAVY							LIGHT					REACTIVITY (original)		REACTIVITY (reverted)	
	VH	D	RF	JH	V-Mut.	CDR3 (aa)	Reverted CDR3 (aa)	Vκ/λ	Jκ/λ	V-Mut.	CDR3 (aa)	Reverted CDR3 (aa)	poly	HEp2	poly	HEp2
PN7	3-74	1-7	3	4	9	RVTGTTSDFDY	RVTGTTSDFDY	λ 7-46	2	5	LLSYSGTRV	LLSYSG**A**RV	+	+	/	/
PN8	4-59	4-23	2	1	13	GDDYGVPFQH	GDDYGVPFQH	κ 4-1	2	7	QQYYSNPRT	QQYYS**T**P**Q**T	+	+	+	/
PN46	4-34	3-10	2	5	22	RPYYYGSGTGWS	RPYYYGSGTGWS	κ 3-20	4	8	QQYDNSPFT	QQY**GS**SPFT	+	+	/	+
PN56	3-23	3-3	2	4	11	AFDLWSGWPFAY	AFD**F**WSGWPF**D**Y	κ 3-20	5	5	QQYDSSPIT	QQY**G**SSPIT	+	+	/	/
PN60	3-7	6-19	2	4	13	GWGWLPD	GWGWLPD**Y**	κ 3-20	3	19	QQYAISPIT	QQY**GS**SPIT	/	/	/	/
PN67	4-59	5-12	2	5	22	DRERGYSGYGHLDP	DRERGYSGYGHLDP	λ 1-47	1	10	ASWDDSLSGLYV	A**A**WDDSLSGLYV	/	/	/	/
PN69	1-8	2-8	2	4	17	GRGYCTNGVCYGATKYFDY	GRGYCTNGVCYGATKYFDY	λ 2-14	2	8	SSYTTNVI	SSYTTNVI	/	/	/	/
PN89	3-74	3-9	2	6	17	LGFPSQRHDILTGHYLDGMDV	LGFPSQRHDILTG**Y**YLDGMDV	κ 2-30	1	3	MQGTHWPPWT	MQGTHWPPWT	+	+	/	/
PN107	3-7	1-1	2	3	21	DNWGQGVRDGFDV	DNWGQGVRD**A**FDV	λ 1-40	3	13	QSYDSRLRNWV	QSYDS**S**L**S**NWV	+	+	/	/
PN115	3-7	3-3	2	6	25	DYDFWSGYSYYYYGMDV	DYDFWSGYSYYYYGMDV	λ 1-51	3	9	GTWDSSLSVRV	GTWDSSLS**AW**V	/	/	/	/
PN116	4-34	/	/	3	25	GGGGFDV	GGGGFDV	κ 1-39	1	14	QQSYTTPWT	QQSY**S**TPWT	/	/	+	+
PN119	1-69*	2-21	3	6	23	DLQGYVTVTAMDV	DLQGYV**V**VTAMDV	κ 1-5*	1	10	QHYNSYFGT	Q**Q**YNSY**S**GT	/	+	/	+
PN153	3-9	/	/	6	8	SLRRYYYYGMDV	SLRRYYYYGMDV	λ 1-40	3	5	QSYDSTLSGWGV	QSYDS**S**LSGWGV	/	/	/	/
PN162	1-69*	3-22	2	4	28	GMHDSSSFYPTQNFDY	GMHDSS**GY**YPTQNFDY	κ 3-11	4	11	QQRSNWPLT	QQRSNWPLT	/	+	/	+
PN189	3-11	/	/	6	9	GVWGAYYYYYGMDV	GVWGAYYYYYGMDV	κ 1-5*	1	5	QQSNSYPWT	QQ**Y**NSY**S**WT	/	/	/	/
VB13	5-51	/	/	4	24	LTDH	LTD**Y**	λ 7-43	3	12	LLFSGGAQLWV	LL**YY**GGAQLWV	+	+	/	/
VB18	1-46	6-13	2	4	17	ADSSSLKSAAPAFY	ADSSSLKSAAPA**L**Y	λ 1-51	2	5	GAWDSSLSVV	G**T**WDSSLSVV	/	/	/	/
VB28	3-23	2-15	2	4	17	EVAEVGNPLFDH	EVAEVGNPLFDH	λ 2-11	3	ND	SSYAGSCL	**C**SYAGSCL	/	+	/	/
VB45	3-21	3-10	2	6	11	PDYGSGGNYYYYYGMDV	PDYGSG**SY**YYYYYGMDV	κ 2-14	1	3	RSYTNNSTLV	**S**SYT**SS**STLV	/	/	/	/
VB111	3-48	2-21	3	4	8	DRVVGIFDH	DRVV**VILYY**	κ 4-1	1	2	QQYYSIPWT	QQYYS**T**PWT	/	+	/	/
VB126	4-39	/	/	5	34	HVLVDDPNWFDP	HVLVDDPNWFD**S**	κ 3D-15	3	9	QHYNRWPPGIT	Q**Q**YN**N**WPPGIT	+	+	/	/
VB132	3-23	3-22	2	3	15	TYYYDNSG	TYYYD**S**SG	κ 1-5	4	9	QHYSTYPLT	Q**Q**Y**NS**YPLT	+	+	/	/
VB148	3-33	6-19	2	2	9	GRINNSGWYLARWYFDL	GRIN**S**SGWYLARWYFDL	κ 1-16	5	10	LQYNSYPPT	**Q**QYNSYPPT	+	+	+	+
VB161	4-61	3-22	2	5	35	GSYSFDSSGRSTDNNWFDP	GSY**YY**DSSGRSTDNNWFDP	κ 3-11	2	11	QHRSDWPPMFT	Q**Q**RS**N**WPPM**Y**T	/	/	/	/
HW154	3-53	/	/	4	13	DPGDLDTLDF	DPGDLDTLD**Y**	κ 3-15	5	13	QQYNNWPPIT	QQYNNWPPIT	/	/	/	/
HW156	3-7	/	/	4	18	RVEPTVKSFDY	RVEPTVKSFDY	κ 3-15	5	10	QQYNKWPPLT	QQYN**N**WPP**I**T	/	/	/	/
HW168	4-39	3-19	3	6	20	HRMMTLGGVLDYYYYGMDI	HRM**I**T**F**GGVLDYYYYGMD**V**	κ 3-15	3	7	QQYNNWPHFT	QQYNNWP**P**FT	/	/	+	+
HW169	1-18	2-15	2	4	17	ACSGGSCYSELPDY	ACSGGSCYSELPDY	κ 3-15	2	1	QQYNNWPPYT	QQYNNWPPYT	/	/	/	/
HW175	1-18	3-10	3	4	20	HLVRGVINRSFDS	HLVRGVINR**Y**FDS	κ 3-20	1	10	QQYGTSPWT	QQYG**S**SPWT	+	+	/	/
HW181	1-46	/	/	4	27	DNGKWAFDY	DNGKWAFDY	λ 2-14	3	8	CSFTRSDAWV	**S**SY**T**SS**ST**WV	/	/	/	/
HW182	4-39	/	/	4	13	PGTTWPHYYFDY	PGTTWPHYYFDY	λ 2-14	2	8	SSYTSSSSVV	SSYTSSS**T**VV	/	/	/	/
HW221	3-74	/	/	5	14	GWAATTYYPF	GWAATTYYPF	κ 3-20	4	3	QQYGSSPLT	QQYGSSPLT	+	+	+	+
HW224	3-15	/	/	3	28	GWKGSFDM	GWKGSFD**V**	κ 4-1	2	13	QQYYSTPYT	QQYYSTPYT	/	/	/	/
HW230	3-7	5-12	2	1	8	DSEYSSSWYNRFHH	DSEYS**G**SWYNRF**Q**H	κ 3-15	4	6	QQYNDWPPLT	QQYN**N**WPPLT	/	/	/	/
HW237	3-48	2-15	2	5	14	LLGYCSGGSCP	LLGYCSGGSCP	λ 1-47	2	1	AAWDDSLSGPVV	AAWDDSLSGPVV	/	+	/	/
HW378	1-46	3-22	2	4	15	SYYYDSSRGIDF	SYYYDSSRGID**Y**	κ 1-27	1	6	QKCNFAPWT	Q**KYNS**APWT	/	+	/	/

*, polymorphic allelles; reverted amino acids in CDR3s are in bold; RF, reading frame; V-Mut., number of mutations within V region; ND, not determined; +, reactive in ELISA; /, nonreactive in ELISA; poly, polyreactive to ss/dsDNA, LPS, and insulin; HEp2, reactive in HEp2 ELISA and/or IFA