

FIGURE 1A

Human	GSASAPTLFPLVSCENSPTSSTSSVAVGCLAQDFLPDSITLSWKYKNNSDISS-TRGFPSV	59
Mouse	ASQSFPNVFPLVSCESPLSDKNLVAMGCLARDFLPSTISFTWNYQNNTEVIQGIPTFPTL	60
Cynomolgus	ESAGPFKEPSVSSFNAPLDTNEVAVGCLAQDFLPDSITFSWKFKNNSDISKGVWGFPSPV	60
Rhesus	GSASAPTLFPLVSCENAPLDTNEVAVGCLAQDFLPDSITFSWKFKNNSDISKGVWGFPSPV	60
Chimpanzee	GSASAPTLFPLVSCENSPTSSTSSVAVGCLAQDFLPDSITFSWKYKNNSDISS-TRGFPSV	59
Orangutan	GSASAPTLFPLVSCENSPTSSTSSVAVGCLAQDFLPDSITFSWKYKNNSDISS-TRGFPSV	59
Human	LRGGKYAATSQVLLPSKDVMQGTDEHVVCVKVQHPNGNKEKNVPLPVIAELPPKVSFVFP	119
Mouse	RTGGKYLATSQVLLSPKSILEGSDIYLCKIHYGGKNRDLHVPPIPAVAEMNPVNVFVFP	120
Cynomolgus	LRGGKYAATSQVLLASKDVMQGTDEHVVCVKVQHPNGNKEQNVPLPVVAERPPNVSVFVFP	120
Rhesus	LRGGKYAATSQVLLASKDVMQGTDEHVVCVKVQHPNGNKEQNVPLPVLAERPPNVSVFVFP	120
Chimpanzee	LRGGKYAATSQVLLPSKEVMQGTDEHVVCVKVQHPNGNKEKNVPLPVTAELPPKVSIFVFP	119
Orangutan	LTGSKYVATSQVLLPSKDVMQGTDEHVVCVKVQHPNGNKEKNVPLPVIAELPPKVSIFIPP	119
Human	RDGFFGN-PRKSKLICQATGFSPRQIQVSWLREGKQVGSVTTDQVQAEAKESGPTTYKV	178
Mouse	RDGFGSPAPRKSCLICEATNFTPKPITVSWLKDGLVESGFTTDPVTIENKGSTPQTYKV	180
Cynomolgus	RDGFVGN-PRESKLICQATGFSPRQIEVSWLREGKQVGSGITTDREVAEAKESGPTTFKV	179
Rhesus	RDGFVGN-PRESKLICQATGFSPRQIEVSWLREGKQVGSGITTDREVAEAKESGPTTFKV	179
Chimpanzee	RDGFFGN-PRSSKLICQATGFSPRQIQVSWLREGKQVGSVTTDQVQAEAKQSGPTTYKV	178
Orangutan	RDGFFGS-PRKSKLICQATGFSPRQIQVSWLREGKQVASGITTDQVQAEAKESGPTTYKV	178
Human	TSTLTIKESDWLQSMFTCRVDHRGLTFQQNASSMCVPDQDTA-IRVFAIPPSFASIFLT	237
Mouse	ISTLTISEIDWLNLVYTCRVDHRGLTFQKNVSSCAASPSTD-ILNFTIPPSFADIFLS	239
Cynomolgus	TSTLTVSERDWLSQSVFTCRVDHRGLTFQKNVSSVCGPNPDTA-IRVFAIPPSFASIFLT	238
Rhesus	TSTLTVSERDWLSQSVFTCRVDHRGLTFQKNVSSVCGPNPDTA-IRVFAIPPSFASIFLT	238
Chimpanzee	TSTLTIKESDWLSQSVFTCRVDHRGLTFQQNASSMCSPGESRHSHPGLCHPPSFASIFLT	238
Orangutan	TSTLTINESDWLSQSMFTCRVDHRGLTFQKNASSMCSNPNTA-IRVFAIPPSFASIFLT	237
Human	KSTKLTCLVTDLTITYDSVTISWTRQNGEAVKTHTNISESHPNATFSAVGEASICEDDWN	297
Mouse	KSANLTCLVSNLATYETLSISWASQSGEPLTKIKIMESHNPNGTFSAGVASVCVEDWNN	299
Cynomolgus	KSTKLTCLVTDLATYDSVTITWTRQNGEALKTHTNISESHNPNGTFSAVGEASICEDDWN	298
Rhesus	KSTKLTCLVTDLATYDSVTITWTRQNGEALKTHTNISESHNPNGTFSAVGEASICEDDWN	298
Chimpanzee	KSTKLACLVTDLTITYDSLISWTRQNGEAVKTHTNISESHPNATFSAVGEASICEDDWN	298
Orangutan	KSTKLTCLVTDLASYSMTISWTRQNGEAVKTHTNISESHPNATFSAVGEASICEDDWN	297
Human	GERFTCTVTHDLPSPKQTI SRPKGVAMHRPDVYLLPPAREQLNIRESATITCLVTGFS	357
Mouse	RKEFVCTVTHRDLPSPQKFI SKPNEVHKHPPAVYLLPPAREQLNIRESATVTCLVKGFS	359
Cynomolgus	GERFRCTVTHDLPSPKQTI SRPKGVAMHRPDVYLLPPAREQLNIRESATITCLVTGFS	358
Rhesus	GERFRCTVTHDLPSPKQTI SRPKGVAMHRPDVYLLPPAREQLNIRESATITCLVTGFS	358
Chimpanzee	GERFTCTVTHDLPSPKQTI SRPKEVALHRPDVYLLPPAREQLNIRELATITCLVTGFS	358
Orangutan	GERFTCTVTHADLPSPKQTI SRPKGVAMHRPDVYLLPPAREQLNIRESATITCLVTGFS	357
Human	PADVQVQWMQRGQPLSPEKYVTSAPMPEPQAPGRYFAHSILTVSEEDWNTGETYTCV-AH	416
Mouse	PADISVQWKQRGQLLPQEKYVTSAPMPEPGAPGFYFTHSILTVTEEDWNSGETYTCVVG	419
Cynomolgus	PADIFVQWMQRGQPLSPEKYVTSAPMPEPQAPGRYFAHSILTVSEEDWNTGETYTCVVA	418
Rhesus	PADIFVQWMQRGQPLSPEKYVTSAPMPEPQAPGRYFAHSILTVSEEDWNTGETYTCVVA	418
Chimpanzee	PADVQVQWMQRGQPLSPEKYVTSAPMPEPQAPGRYFAHSILTVSEEDWNTGETYTCVVA	418
Orangutan	PADVQVQWMQRGQPLSPEKYVTSAPMPEPQAPGRYFAHSILTVSEEDWNTGETYTCVVA	417

FIGURE 1B

Human	EALPNRVTERTVDKSTGKPTLYNVSLV-----MSDTAGTCY-----	452
Mouse	EALPHLVTERTVDKSTGKPTLYNVSLI-----MSDTGGTCY-----	455
Cynomolgus	EALPNRVTERTVDKSTGK-PTLYNV--SLVILWTTLSTFVALFVLTLLYSGIVTFIKVR-	474
Rhesus	EALPNRVTERTVDKSTEGEVSADDEE--GFENLWATASTFIVLFLLSLFYSTTVTLF----	472
Chimpanzee	EALPNRVTERTVDKSTGKTHPVQRVPVGHVRHSWHLTLLACPQAQGRPLCVCACKLTV	478
Orangutan	EALPNRVTERTVDKSTGKPTLYNVSLV-----MSDTAGTCY-----	453

Human	---	452
Mouse	---	455
Cynomolgus	---	474
Rhesus	---	472
Chimpanzee	STG	481
Orangutan	---	453

Figure 2

	IgM	IgM	IgM	IgM S401A	IgM S401A	IgM E402A	IgM E402A	IgM E403A	IgM R344A	IgM E345A
	VJ	VJ Y102A	VJ T103A	VJ	VJ Y102A	VJ	VJ Y102A	VJ	VJ	VJ
m pIgR	100%	10%	nd	90%	10%	50%	10%	nd	nd	nd
h pIgR	100%	10%	100%	90%	10%	40%	10%	60%	100%	50%
m FcαμR	100%	10%	nd	80%	10%	50%	10%	nd	nd	nd
h FcαμR	100%	10%	60%	20%	10%	10%	10%	10%	10%	10%
m FcμR	100%	20%	nd	20%	30%	20%	20%	nd	nd	nd
h FcμR	100%	100%	100%	100%	100%	10%	10%	20%	10%	10%

FIGURE 3A-3E

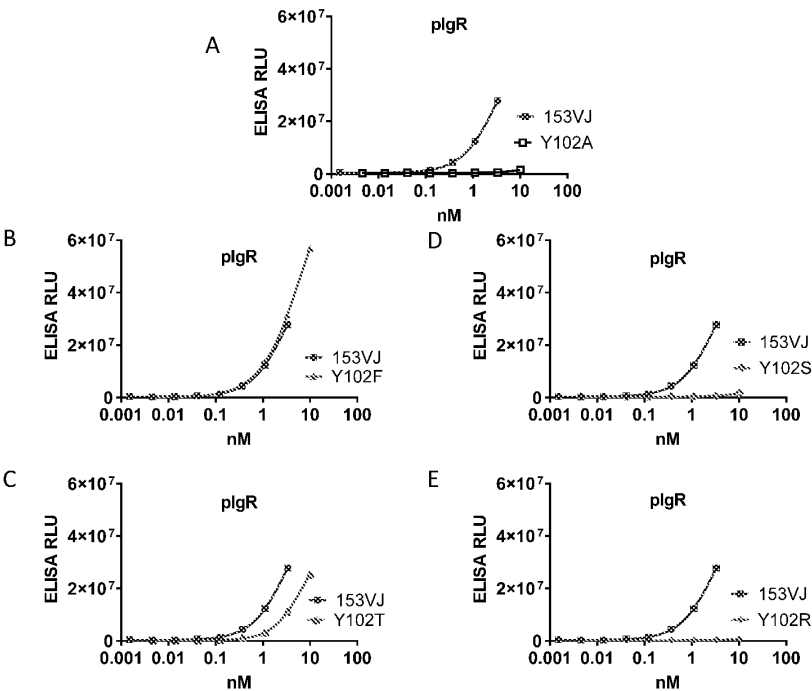


FIGURE 4

Antibody		A ($\mu\text{g/ml}$)	B ($\mu\text{g/ml}$)	$t_{1/2\alpha}$ (h)	$t_{1/2\beta}$ (h)	C_0 ($\mu\text{g/ml}$)	$\text{AUC}_{0-\text{inf}}$ ($\mu\text{g/ml}^*\text{h}$)	MRT (h)
IgM	J	75	10	0.5	8	85	177	8.3
IgM	J Y102A	53	69	2.6	37	122	3869	50.4
IgM	VJ	93	8	0.2	5	101	89	4.7
IgM	VJ Y102A	76	38	7.7	53	114	3734	62.1
IgM S401A	VJ	126	48	0.3	17	175	1232	23.3
IgM S401A	VJ Y102A	76	96	1.1	27	172	3928	38.4
IgM E402A	VJ	41	66	2.4	22	107	2225	29.7
IgM E402A	VJ Y102A	35	114	0.2	25	150	4191	36.6
IgM	VJH	121	28	1.4	33	148	1544	39.8
IgM	VJH Y102A	63	68	6.8	35	131	4074	44.8

FIGURE 5

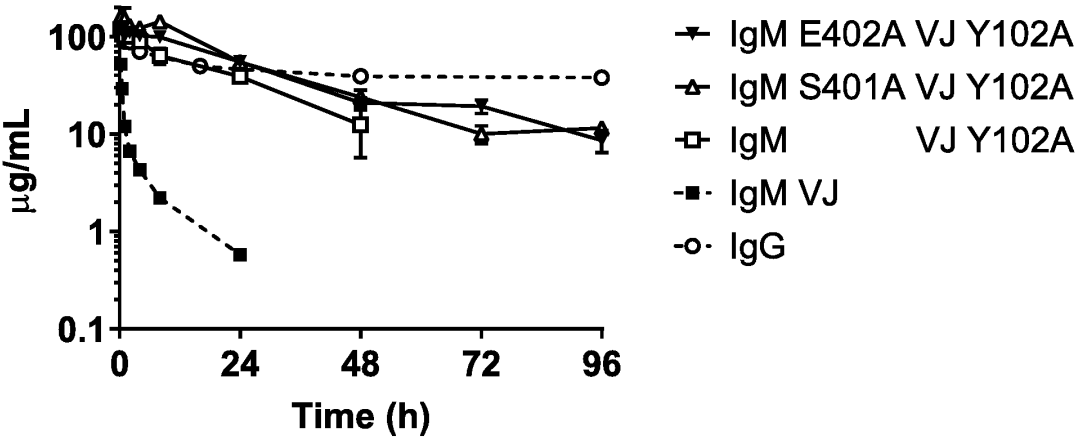


Figure 6

Antibody	$t_{1/2} \alpha$ (h)	$t_{1/2} \beta$ (h)	$AUC_{0-\infty}$ ($\mu\text{g/ml}\cdot\text{hr}$)	$AUC_{\text{MUT/W}_T}$
IgM VJ	0.49	17.6	388	
IgM VJ-N49A	0.8	16.0	625	1.6