

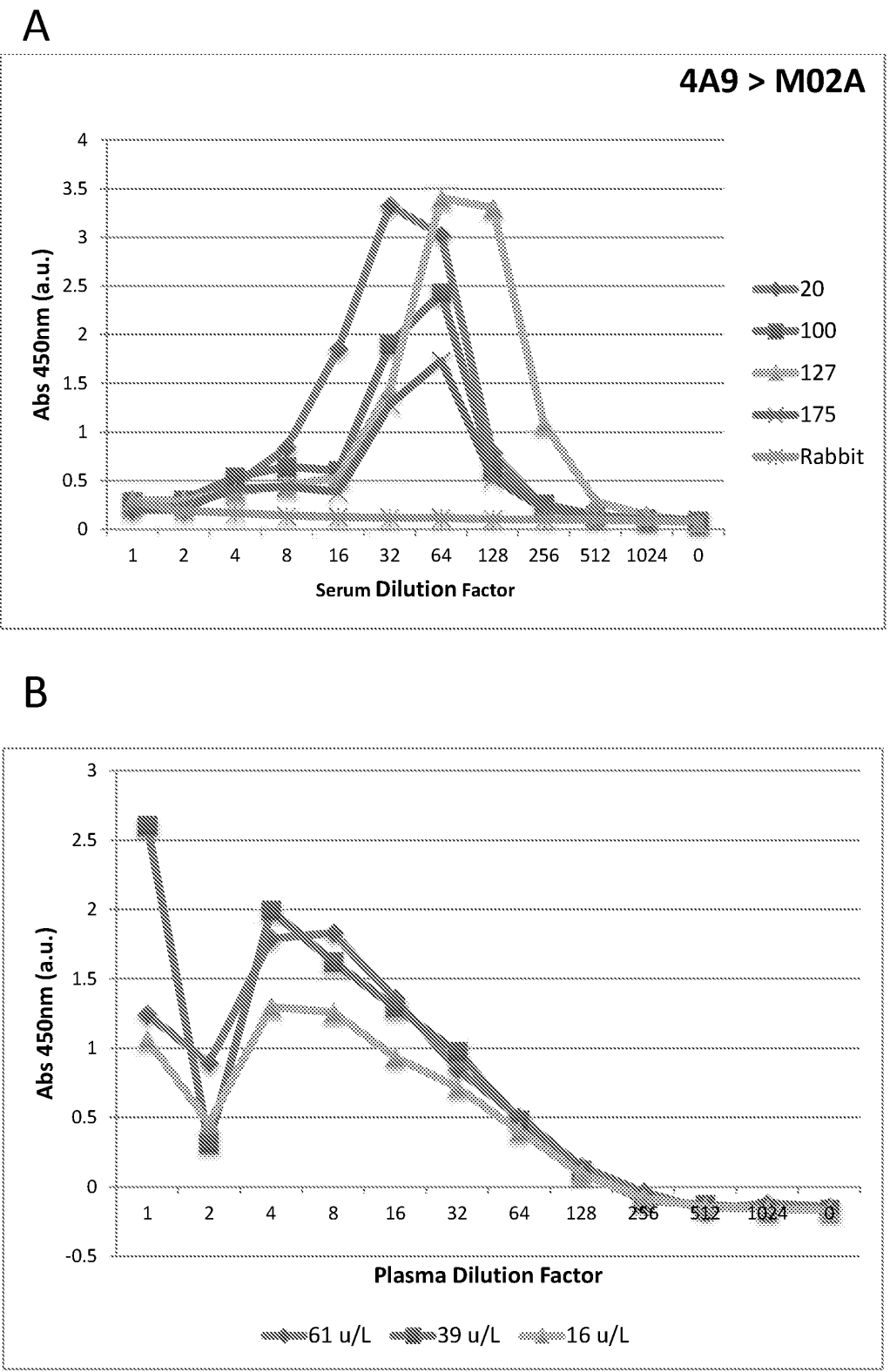


FIG. 1

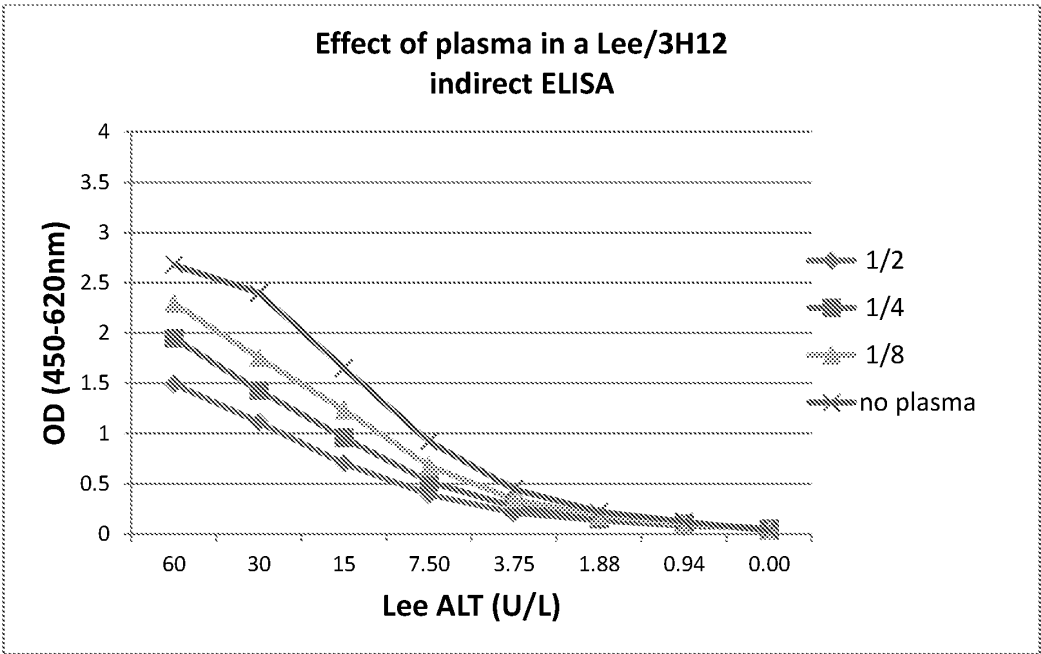
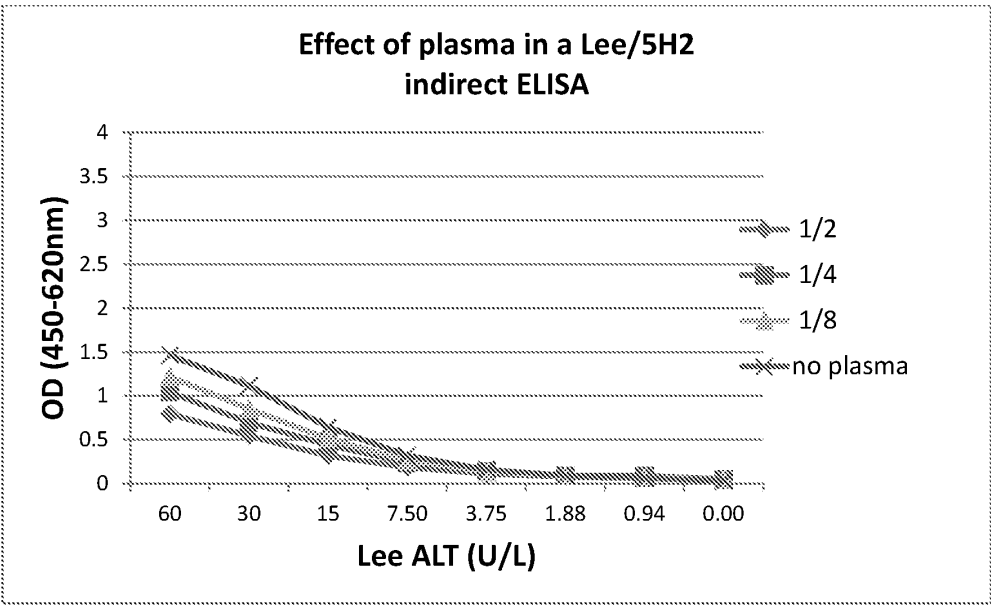


FIG. 2A

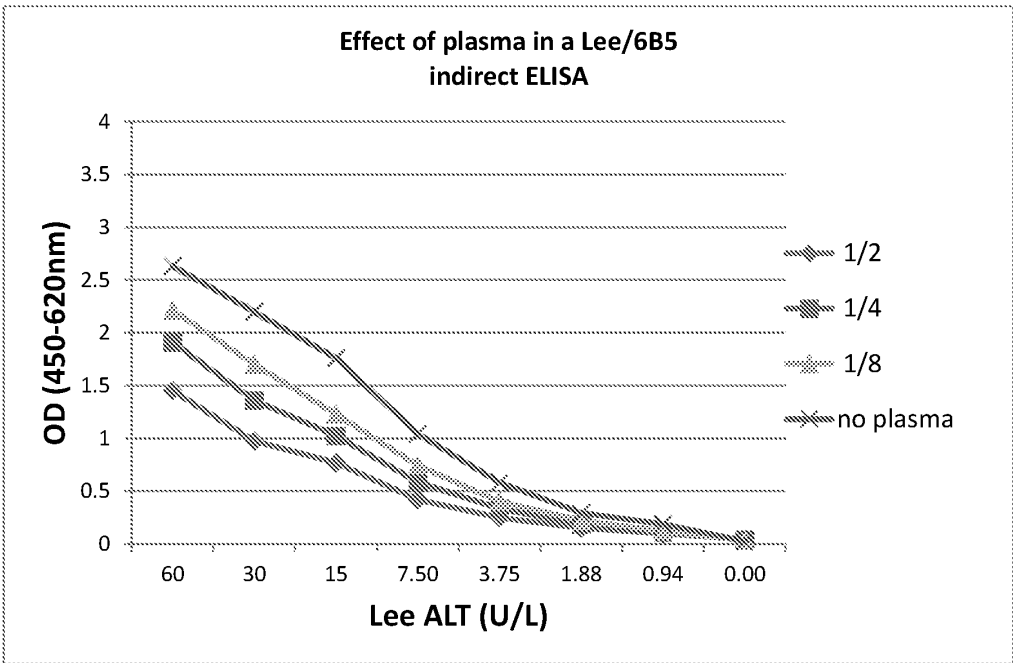
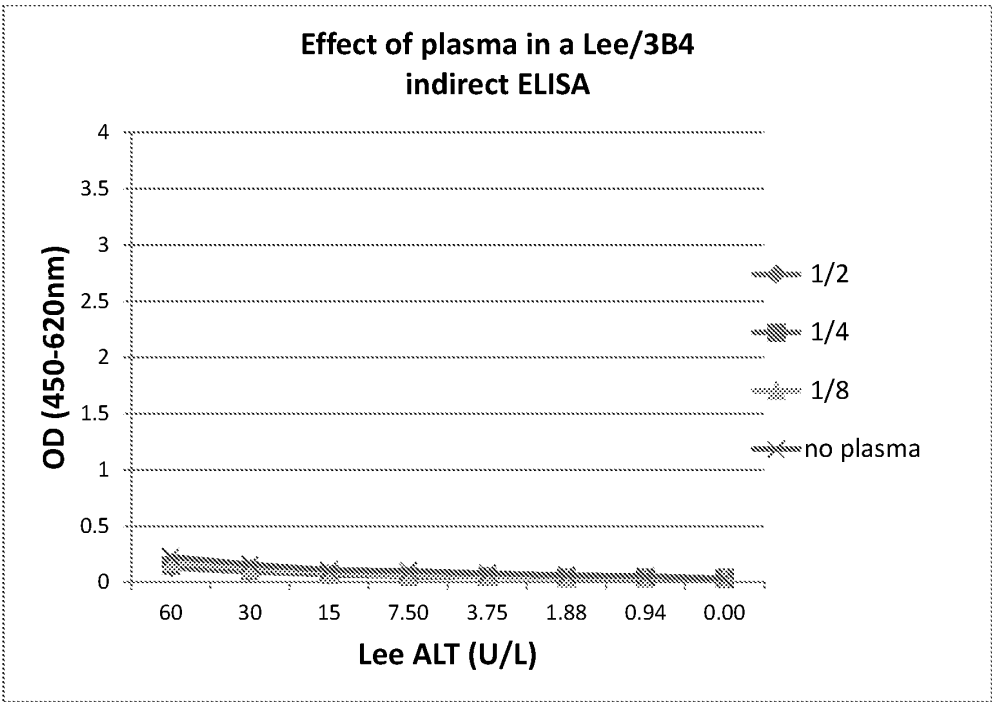


FIG. 2A (CONTINUED)

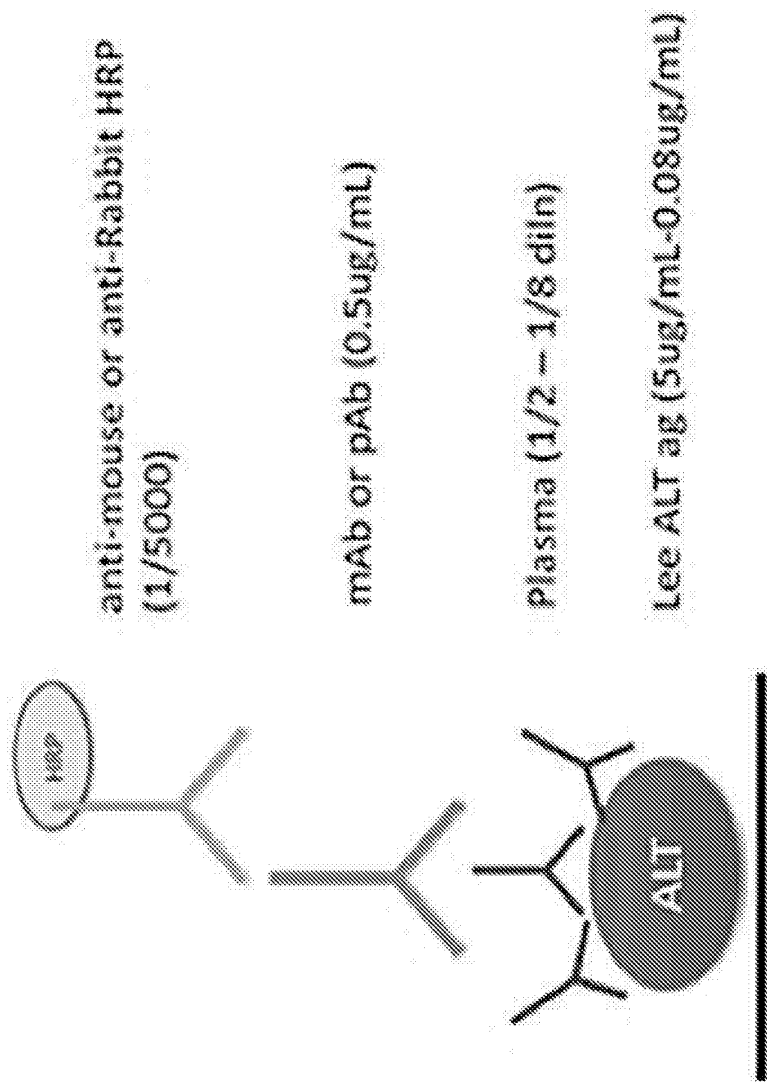


FIG. 2B

Alanine aminotransferase 1

Human versus Mouse (Mus musculus) Range: 1 to 496

Identities 433/496(87%), Positives 459/496(92%) Gaps 0/496(0%)

Human	1	MASSTGDRSQAVRHGLRAKVLTLTLDGMNPRVRVEYAVRGPIVQRALELEQELRQGVKKPF	60
Mouse	1	MAS DR QA R+GL+ KVLTLT MNP VRRVEYAVRGPIVQRALELEQELRQGVKKPF	60
Human	61	TEVIRANIGDAQAMGQRPITFRLQVLALCVNPDLLSSPNFPDDAKKRAERILQACGGHSL	120
Mouse	61	TEVIRANIGDAQAMGQRPITF RQVLALCV P+LLSSP+FP+DAK+RAERILQACGGHSL	120
Human	121	GAYSVSSGIQLIREDVARYIERRDGGIPADPNVFLSTGASDAIVTVLKLLVAGEGHRRT	180
Mouse	121	GAYS+SSGIQ IREDVA+YIERRDGGIPADPN+FLSTGASDAIVT+LKLLVAGEG RT	180
Human	181	GVLIPQYPLYSATLAELGAVQVDYYLDEERAWALDVAELHRLGQARDHCRPRALCVI	240
Mouse	181	GVLIPQYPLYSA LAEL AVQVDYYLDEERAWALD+AEL RAL QARD C PR LCVI	240
Human	241	NPGNPTGQVQTRECI EAVIRFAFEERLFLLADEVYQDNVYAAGSQFHSFKKVLMMGPPY	300
Mouse	241	NPGNPTGQVQTRECI EAVIRFAFEEGLFLMADEVYQDNVYAEGSQFHSFKKVLTEMGPPY	300
Human	301	AGQQELASFHSTSKGYMGECGFRGGYVEVVNMDAAVQQQMLKLSVRLCPPVPGQALLDL	360
Mouse	301	A QQELASFHS SKGYMGECGFRGGYVEVVNMDA VQ+QM KLMSVRLCPPVPGQAL+ +	360
Human	361	VVSPPTDPSFAQFQAEKQAVLAELA AAKALTEQVFNEAPGISCNPVQGAMYSFPRVQL	420
Mouse	361	VVSPPTPSEPSFKQFQAEKQAVLAELA AAKALTEQVFNEAPGIRCNPVQGAMYSFPQIQ	420
Human	421	PPRAVERAQELGLAPDMFFCLRLLEETGICVVP GSGFGQREGTYHFRMTILPPLEKLRLL	480
Mouse	421	P +AV+RAQ+LGLAPDMFFCL LLEETGICVVP GSGFGQ+EGTYHFRMTILPP+EKLR+L	480
Human	481	LEKLSRFHAKFTLEYS	496
Mouse	481	LEKL FHAKFT EYS	496

FIG. 3A

Alanine aminotransferase 1

Human versus Rat (*Rattus norvegicus*) Range: 1 to 496

Identities 436/496(88%), Positives 463/496(93%) Gaps 0/496(0%)

Human	1	MASSTGDRSQAVRHGLRAKVLTLTLDGMNPRVRRVEYAVRGPIVQRALELEQELRQGVKKPF	60
		MAS D+SQA R+GL+ KVLTLTLD MNP VRRVEYAVRGPIVQRALELEQELRQGVKKPF	
Rat	1	MASRVNDQSQASRNLKKGKVLTLTDMNPCVRRVEYAVRGPIVQRALELEQELRQGVKKPF	60
Human	61	TEVIRANIGDAQAMGQRPITFRLQVLALCVNPDLSSPNFPDDAKKRAERILQACGGHSL	120
		TEVIRANIGDAQAMGQRPITF RQVLALCV P+LLSSP+FP+DAK+RAERILQACGGHSL	
Rat	61	TEVIRANIGDAQAMGQRPITFFRQVLALCVYPNLLSSPDFPEDAKKRAERILQACGGHSL	120
Human	121	GAYSVSSGIQLIREDVARYIERRDGGIPADPNNVFLSTGASDAIVTVLKLIVAGEGHTRT	180
		GAYS+SSGIQ IREDVA+YIERRDGGIPADPNN+FLSTGASDAIVT+LKLLV+GEG RT	
Rat	121	GAYSISSGIQPIREDVAQYIERRDGGIPADPNNIFLSTGASDAIVTMLKLLVSGEGRART	180
Human	181	GVLIPQYPLYSATLAELGAVQVDYYLDEERAWALDVAELHRLGQARDHCRPRALCVI	240
		GVLIPQYPLYSA LAEL AVQVDYYLDEERAWALD+AEL RAL QARD C PR LCVI	
Rat	181	GVLIPQYPLYSAALAELDAVQVDYYLDEERAWALDIAELRRALCQARDRCCPRVLCVI	240
Human	241	NPGNPTGQVQTRECI EAVIRFAFEERLFLLADEVYQDNVYAAGSQFHSFKKVLMMGPPY	300
		NPGNPTGQVQTRECI EAVIRFAF+E LFL+ADEVYQDNVYA GSQFHSFKKVLMMGPPY	
Rat	241	NPGNPTGQVQTRECI EAVIRFAFKEGLFLMADEVYQDNVYAEGSQFHSFKKVLMMGPPY	300
Human	301	AGQQELASFHSTSKGYMGECGFRGGYVEVVNMDAAVQQQMLKLMSVRLCPPVPGQALLDL	360
		+ QQELASFHS SKGYMGECGFRGGYVEVVNMDA VQ+QM KLMSVRLCPPVPGQAL+D+	
Rat	301	STQQELASFHSVSKGYMGECGFRGGYVEVVNMDAEVQKQMGKLMSVRLCPPVPGQALMDM	360
Human	361	VVSPAPTDPSPFAQFQAEKQAVLAELA AAKAKLTEQVFNEAPGISCNPVQGAMYSFPRVQL	420
		VVSP P++PSF QFQAE+Q VLAELA AAKAKLTEQVFNEAPGI CNPVQGAMYSFP+VQL	
Rat	361	VVSPPTPSEPSFKQFQAEKQAVLAELA AAKAKLTEQVFNEAPGIRCNPNVQGAMYSFPQVQL	420
Human	421	PPRAVERAQELGLAPDMFFCLRLLEETGICVVP GSGFGQREGTYHFRMTILPPLEKLRLLL	480
		P +AV+RAQELGLAPDMFFCL LLEETGICVVP GSGFGQ+EGTYHFRMTILPP+EKLRLLL	
Rat	421	PLKAVQRAQELGLAPDMFFCLCLLEETGICVVP GSGFGQQEGTYHFRMTILPPMEKLRLLL	480
Human	481	LEKLSRFHAKFTLEYS	496
		LEKLS FHAKFT EYS	
Rat	481	LEKLSHFHAKFTHEYS	496

FIG. 3B

Alanine aminotransferase 1

Human ALT1 versus Rabbit (Oryctolagus cuniculus) ALT2 Range: 17 to 496

Identities 334/480(70%), Positives 410/480(85%) Gaps 17/496(3%)

(NOTE: Rabbits do not have ALT1 homolog)

Human	17	RAKVLTLTLDGMNPRVRRVEYAVRGPIVQRALELEQELRQGVKKPFTEVIRANIGDAQAMGQ	76
		R ++LTL+ MNP+V+ VEYAVRGPIV +A E+E EL++G+KKPFTEVIRANIGDAQAMGQ	
Rabbit	44	RERILTLESMNPQVKAVEYAVRGPIVLKAGEIELELQRGIKKPFTEVIRANIGDAQAMGQ	103
Human	77	RPITFLRQVLALCVNPDLSSPNFPDDAKKRAERILQACGGHSLGAYSVSSGIQLIREDV	136
		+PITFLRQV+ALC P+LL SP+FP+DAKKRA RILQACGG+SLG+YS S G+ IREDV	
Rabbit	104	QPITFLRQVMALCTYPNLLDSPSPEDAKKRARRILQACGNSLGSYSASQGVNCIREDV	163
Human	137	ARYIERRDGGIPADPNNVFLSTGASDAIVTVLKLVLVAGEGHTRTGVLIPQYPLYSATL	196
		A YI RRDGG+PADP+N++L+TGASD I T LK+LV+G G +RTGV+IPIQYPLYSA +	
Rabbit	164	AAYITRRDGGVPADPDNIYLTGASDGISTTLKILVSGGGKSRTGVMIPQYPLYSAVI	223
Human	197	AELGAVQVDYYLDEERAWALDVAELHREALGQARDHCRPRALCVINPGNPTGQVQTRECI	256
		+EL AVQV+YYLDEE WAL+V EL RAL +A+DHC P+ LC+INPGNPTGQVQ+R+CIE	
Rabbit	224	SELDAVQVNYLDEENCWALNVNELRRALREAKDHCDPKVLCIINPGNPTGQVQSRKCIE	283
Human	257	AVIRFAFEERLFLLADEVYQDNVYAAGSQFHSFKKVLMMGPPYAGQQELASFHSTSKGY	316
		VI FA+EE+LFLLADEVYQDNVY+ +FHSFKKVL EMGP Y+ ELASFHSTSKGY	
Rabbit	284	DVIHFAWEEKLFLLADEVYQDNVYSPDCRFHSFKKVLVEMGPEYSNNVELASFHSTSKGY	343
Human	317	MGECGFRGGYVEVVNMDAAVQQQMLKLMSVRLCPPVPGQALLDLVVSPAPTDPSFAQFQ	376
		MGECG+RGGY+EV+N+ ++ Q++KL+SVRLCPPV GQA +D+VV+PP P + SF QF	
Rabbit	344	MGECGYRGGYMEVINLHPEIKGQLVKLLSVRLCPPVSGQAAMDIVVNPVPGEESFEQFI	403
Human	377	AEKQAVLAELAAKAKLTEQVFNEAPGISCNPVQAMYSFPRVQLPPRAVERAQELGLAPD	436
		EK++VL LA KAKLTE +FN+ PGI CNP+QGAMY+FPR+ +P +AVE AQ +APD	
Rabbit	404	REKESVLGNLAKKAKLTEDLFNQVPGIHCNPLQGAMYAFPRIFIPAKAVEEAQAHKMAPD	463
Human	437	MFFCLRLLLEETGICVVPGSGFGQREGTYHFRMTILPPEKLRLLLEKLSRFHAKFTLEYS	496
		MF+C++LLEETGICVVPGSGFGQREGTYHFRMTILPP+EKL+ +L+K+ FH +F +Y+	
Rabbit	464	MFYCMKLLLEETGICVVPGSGFGQREGTYHFRMTILPMEKLTQVQKDFHMQFLEKYA	523

FIG. 3C

A

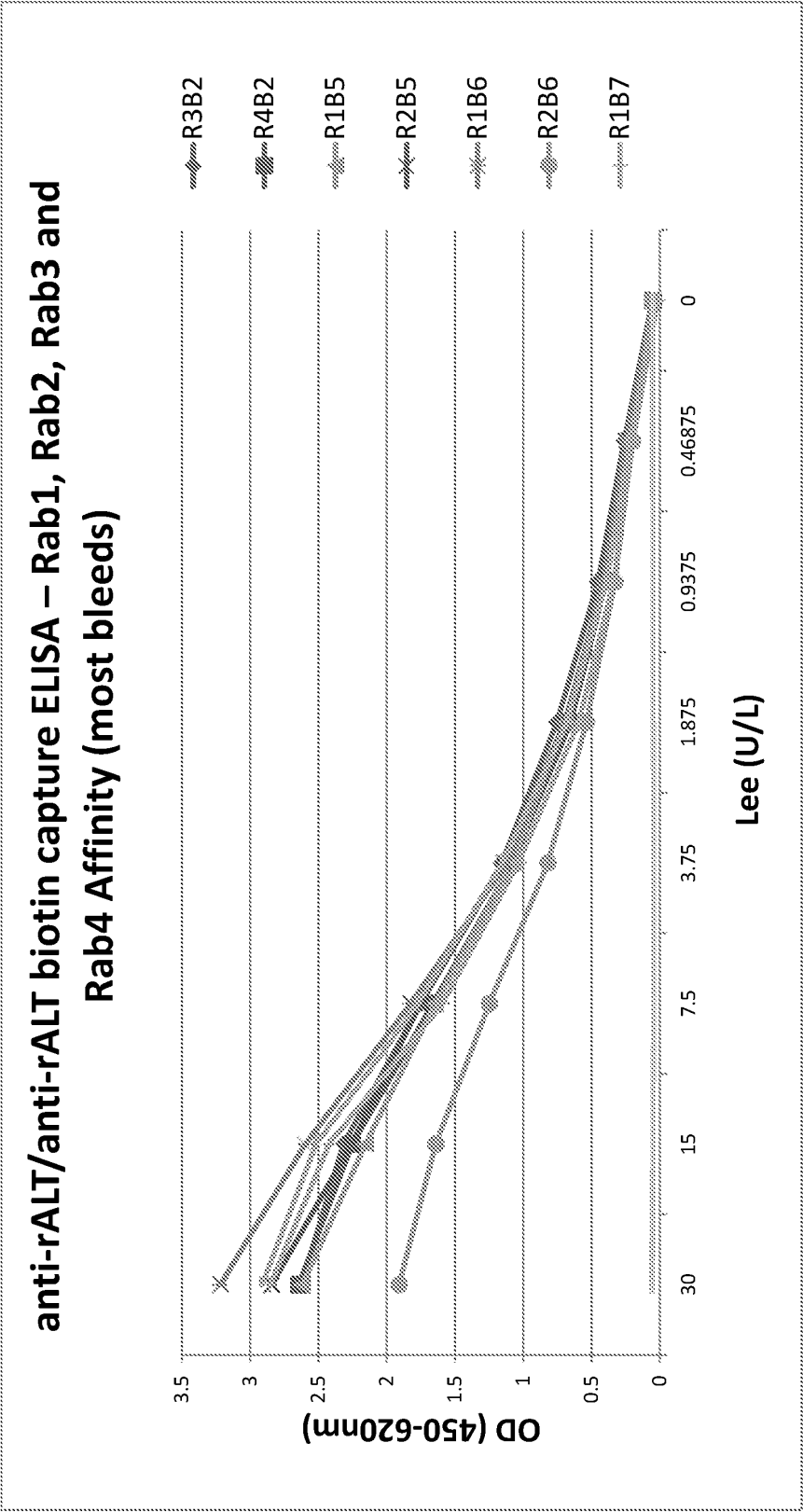


FIG. 4

B

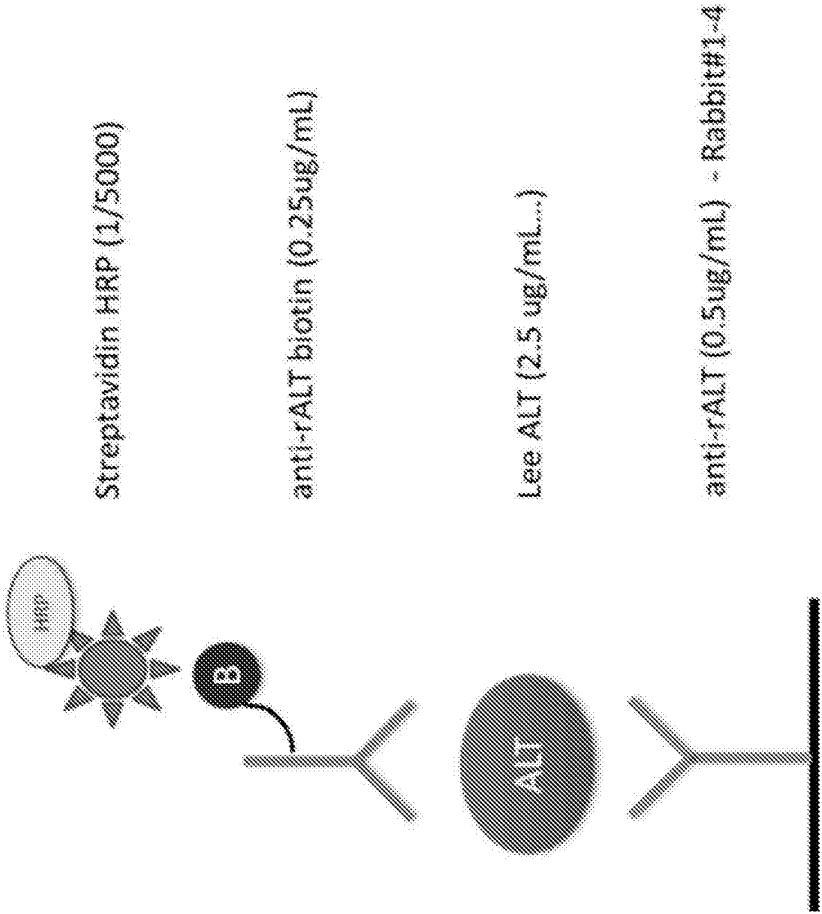


FIG. 4 (CONTINUED)

Effect of plasma in a Lee/anti-rALT
(Affinity) indirect ELISA

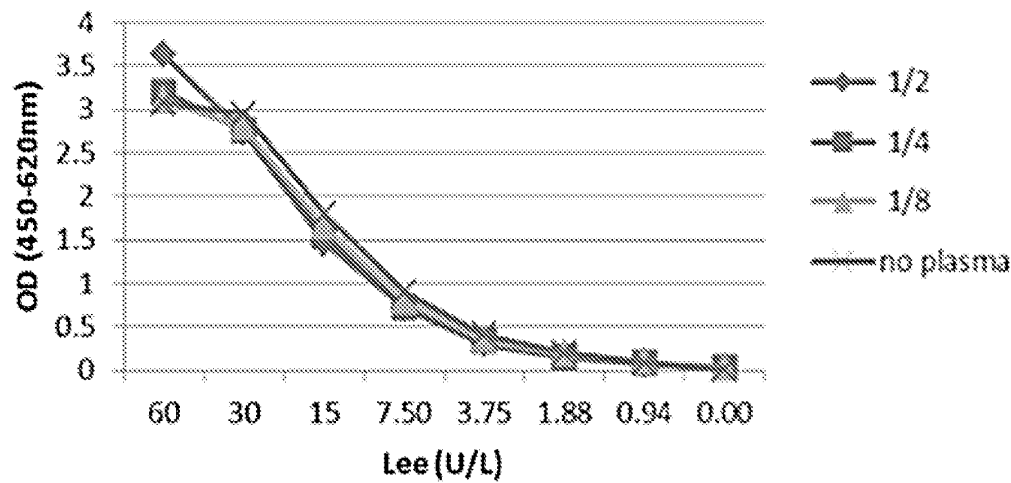


FIG. 5

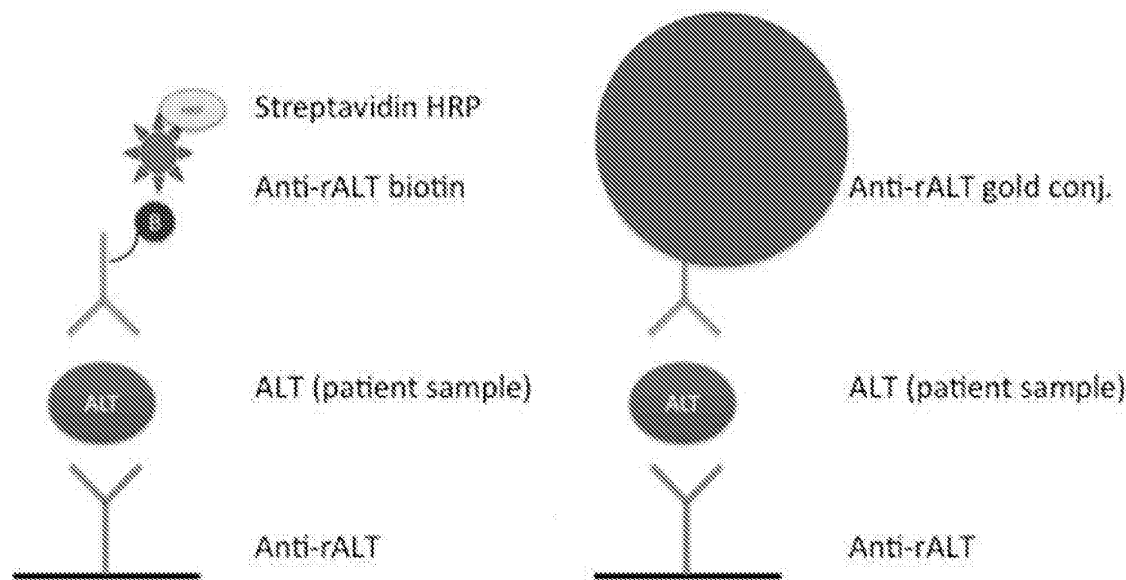
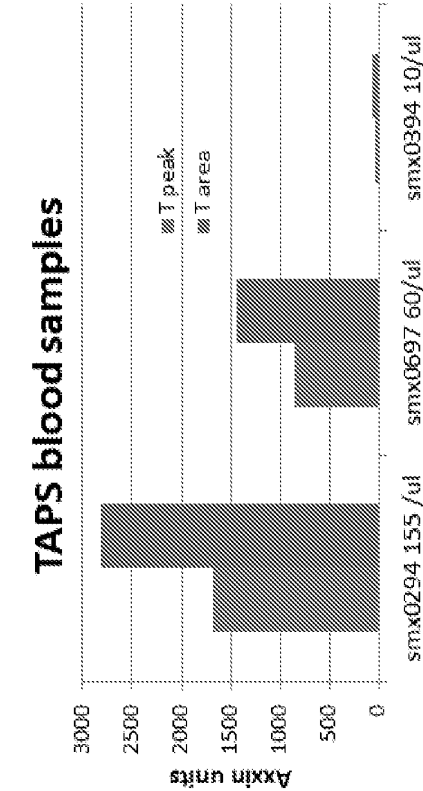
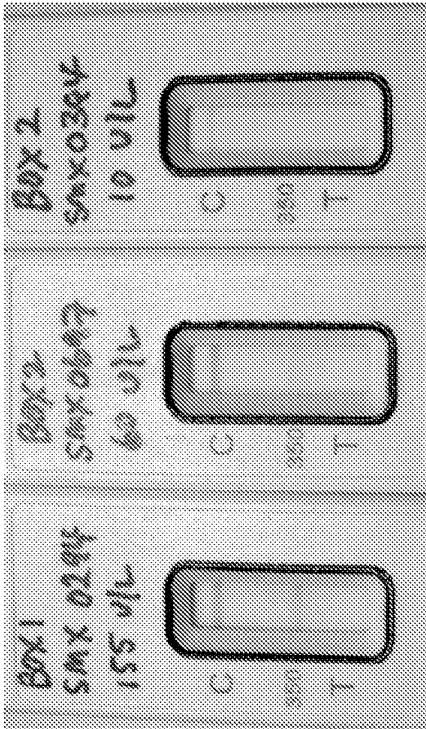


FIG. 6

B



A



C

Method

1. Add 20ul plasma to well B
2. Add 3 drops of RB to well B
3. Read after 20 minutes

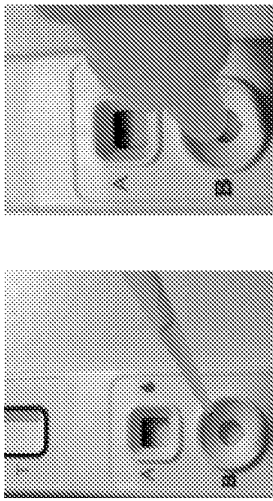


FIG. 7



FIG. 7(CONTINUED)

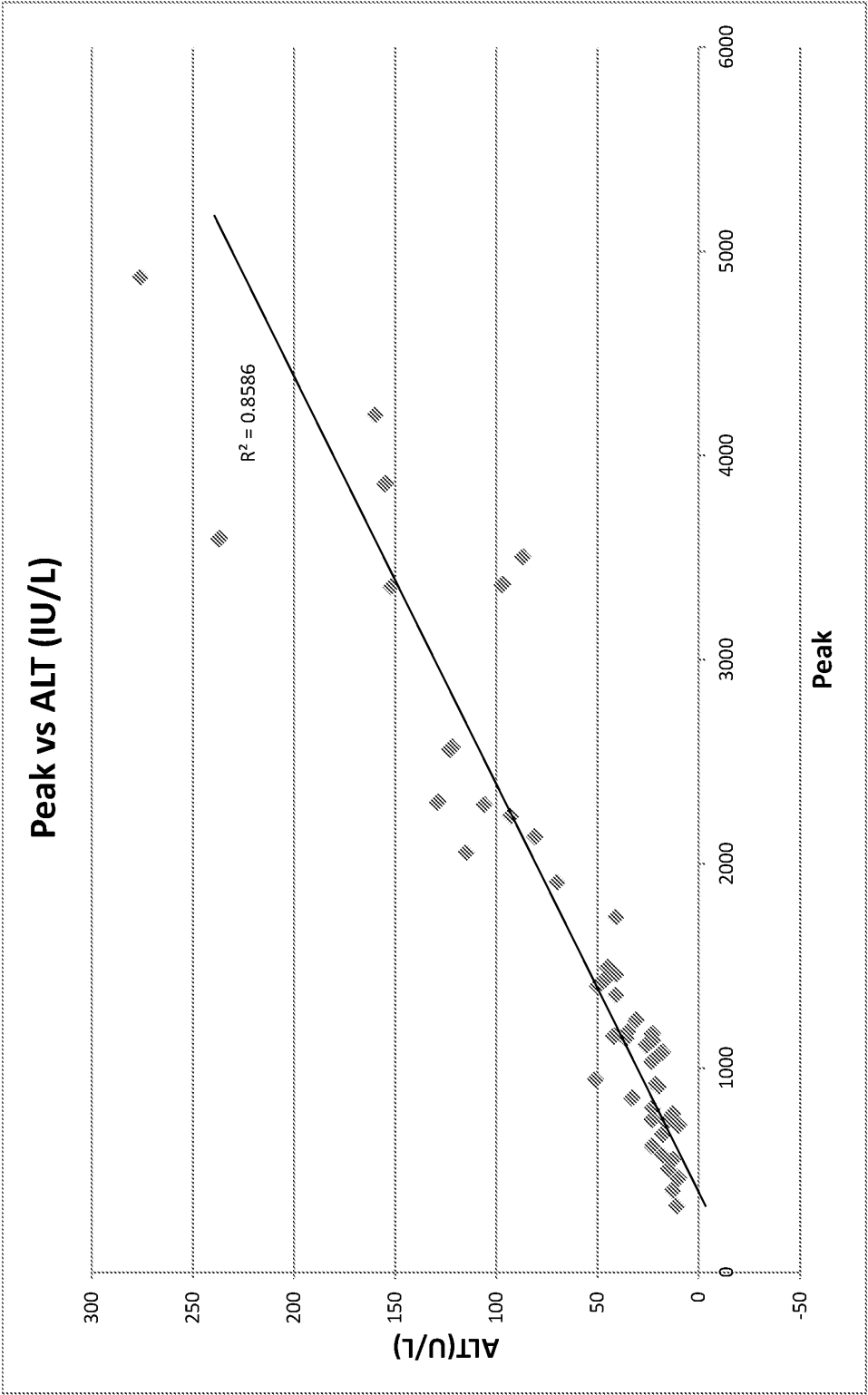


FIG. 8A

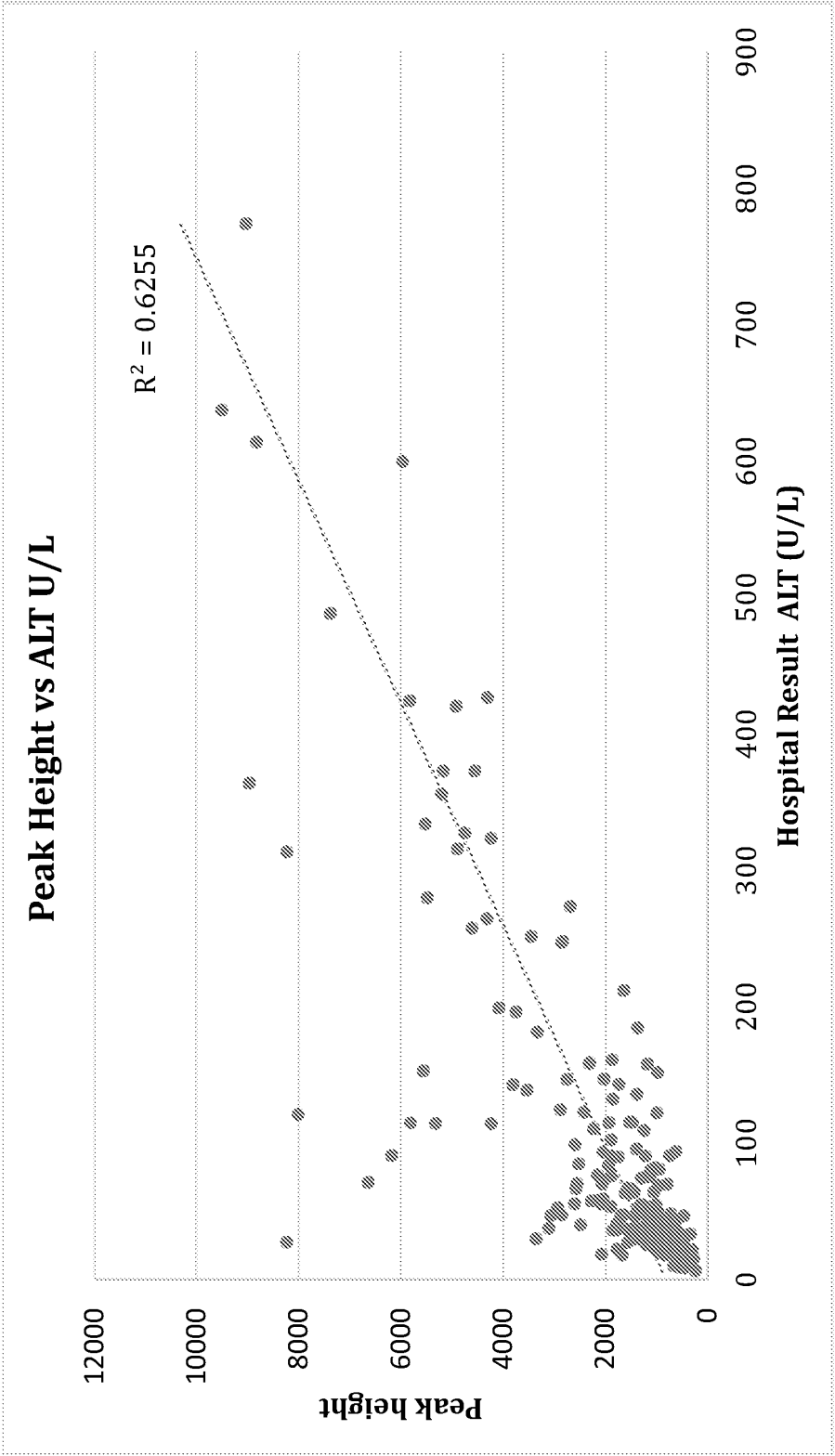
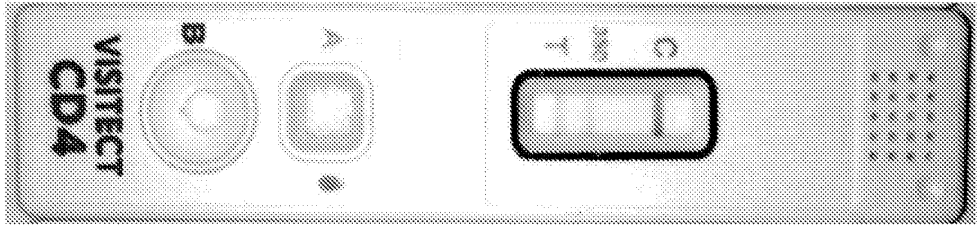
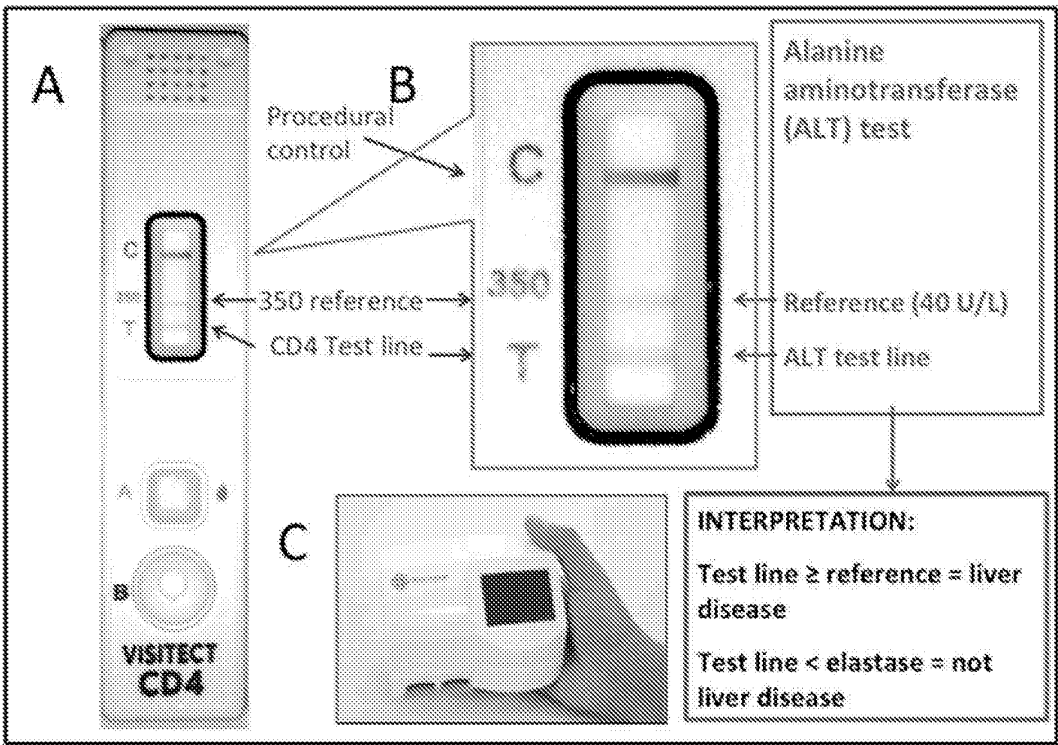


FIG. 8B



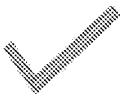
Visitect CD4 Test developed by some of the inventors, at Burnet Institute

FIG. 9

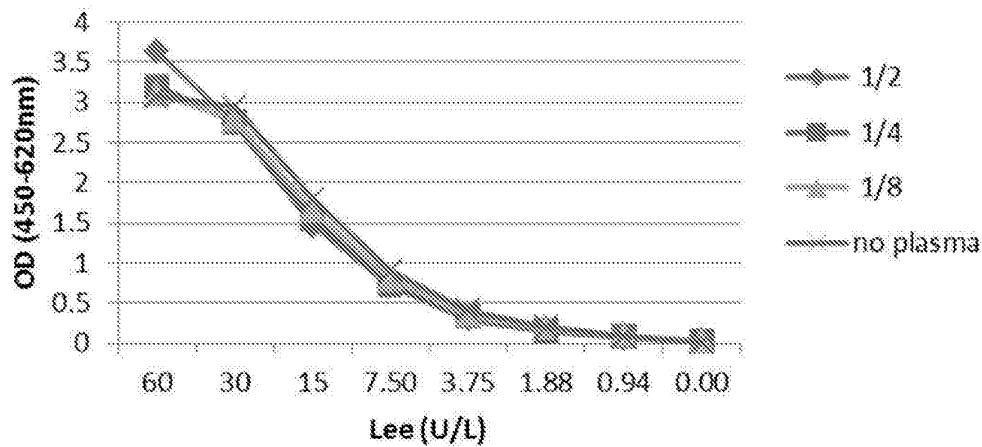


Potential format for lateral flow immunochromatographic POC test for ALT

FIG. 10



**Effect of plasma in a Lee/anti-rALT
(Affinity) indirect ELISA**



**Effect of plasma in a Lee/anti-Hu03
(Affinity) indirect ELISA**

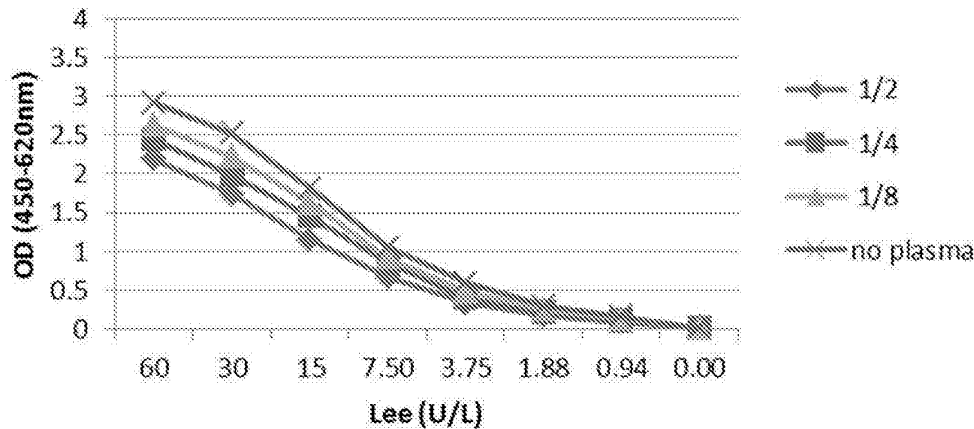
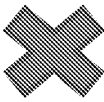
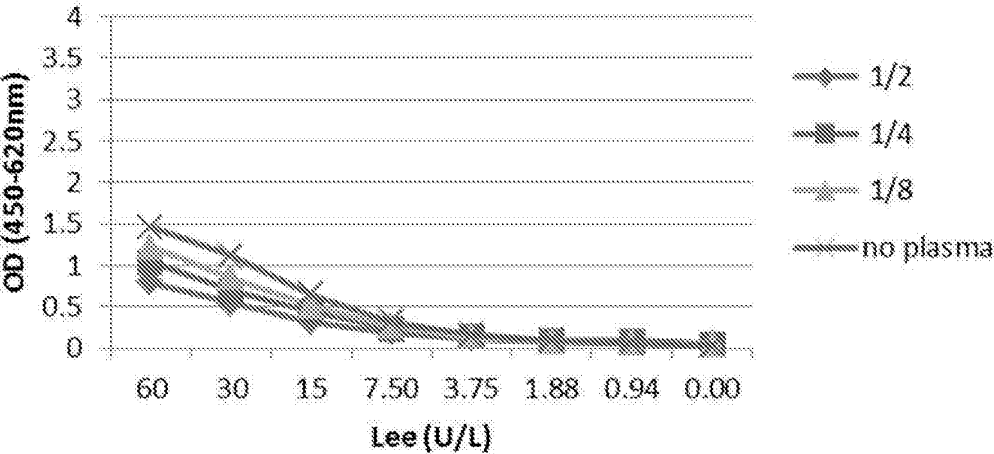
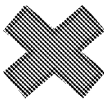


FIG. 11A

Effect of plasma in a Lee/5H2 indirect ELISA



Effect of plasma in a Lee/3H12 indirect ELISA

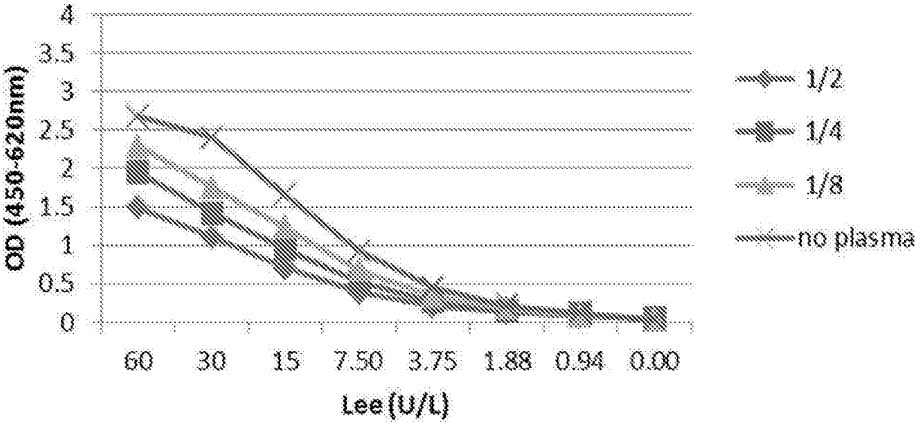
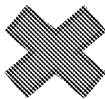
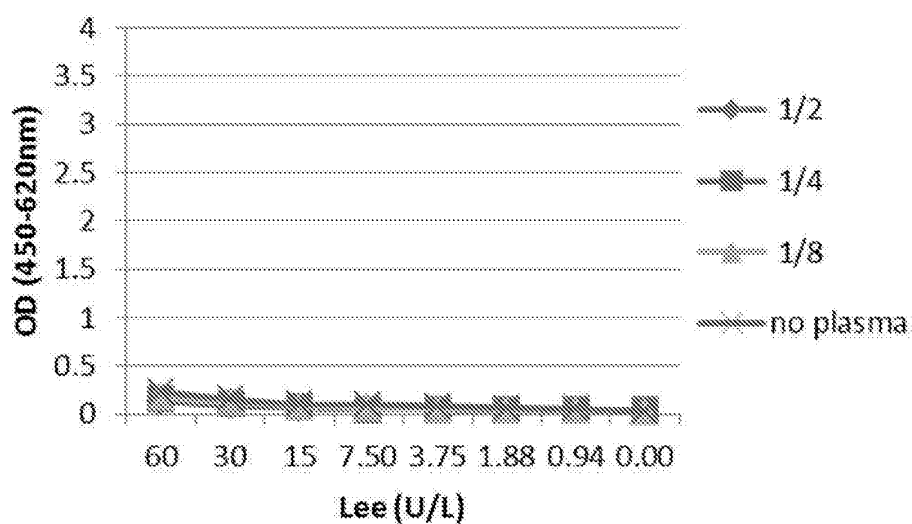
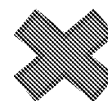


FIG. 11A (CONTINUED)

Effect of plasma in a Lee/3B4 indirect ELISA



Effect of plasma in a Lee/6B5 indirect ELISA

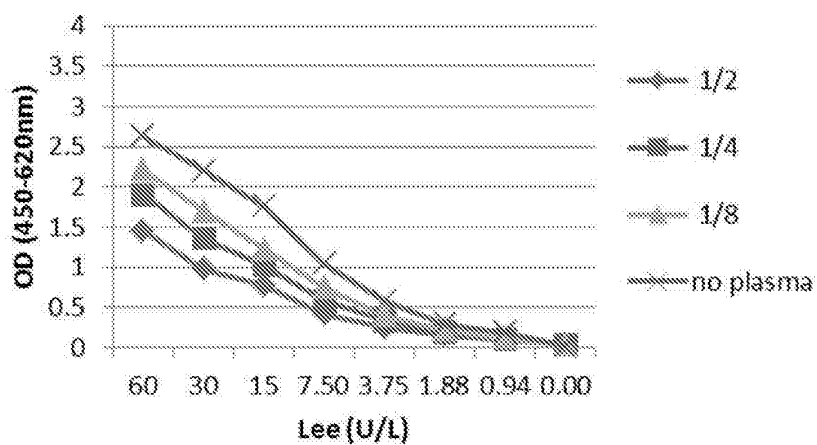
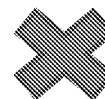


FIG. 11A (CONTINUED)

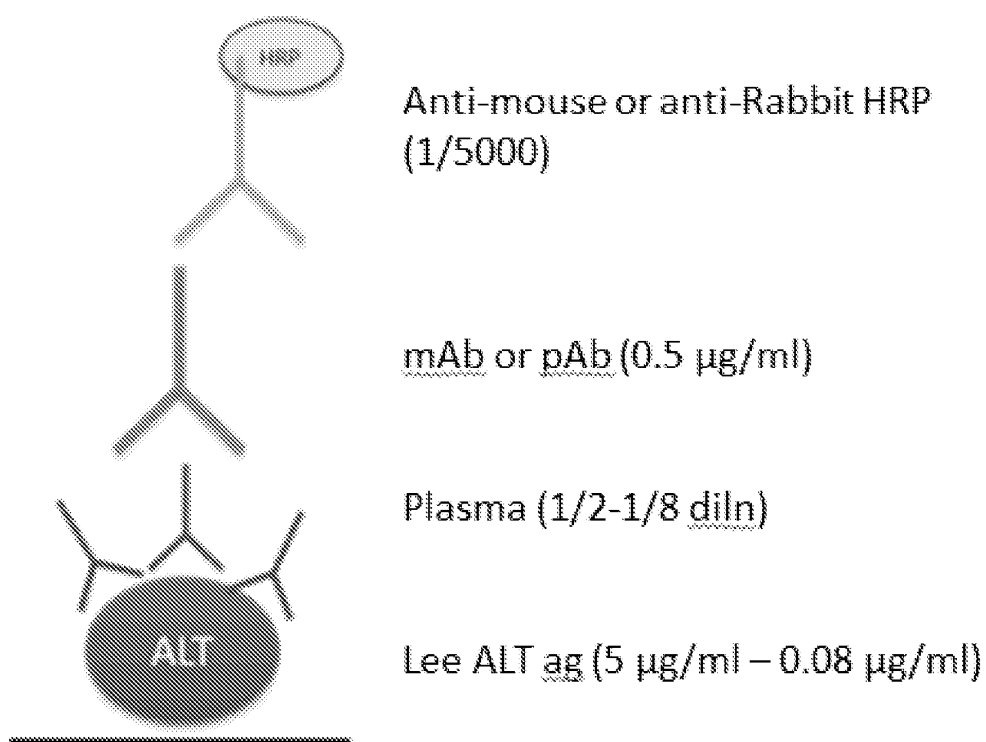
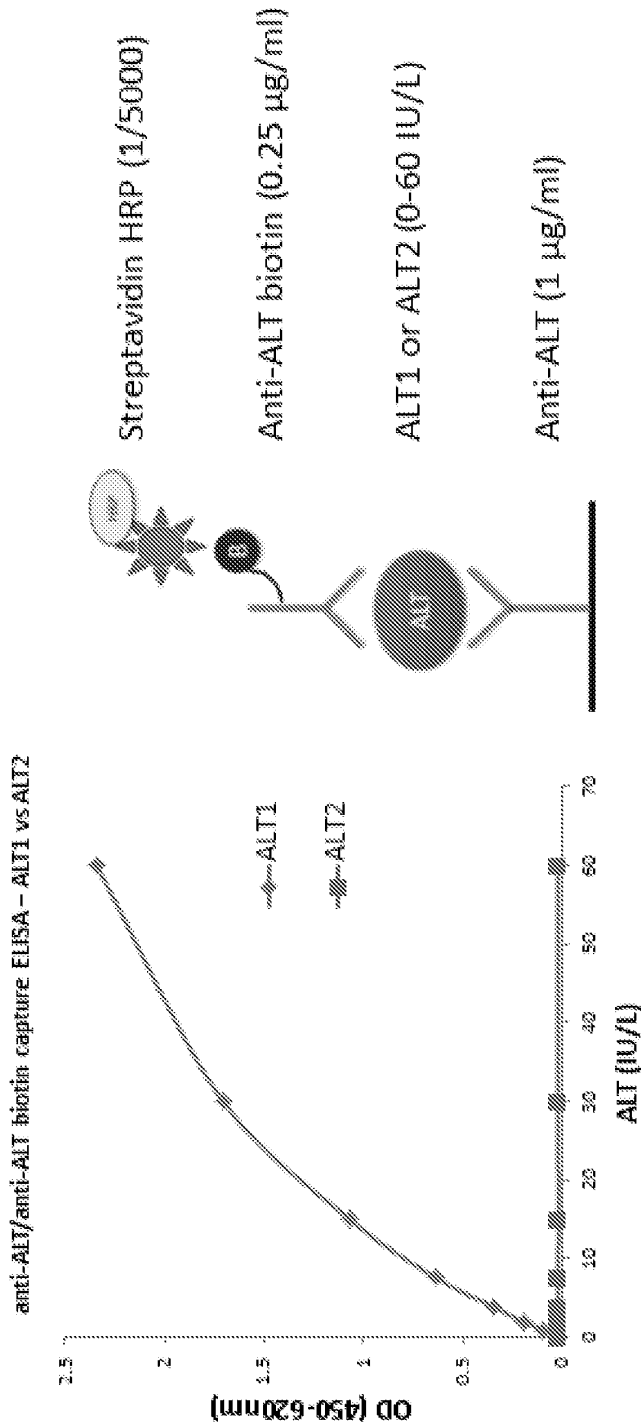


FIG. 11B

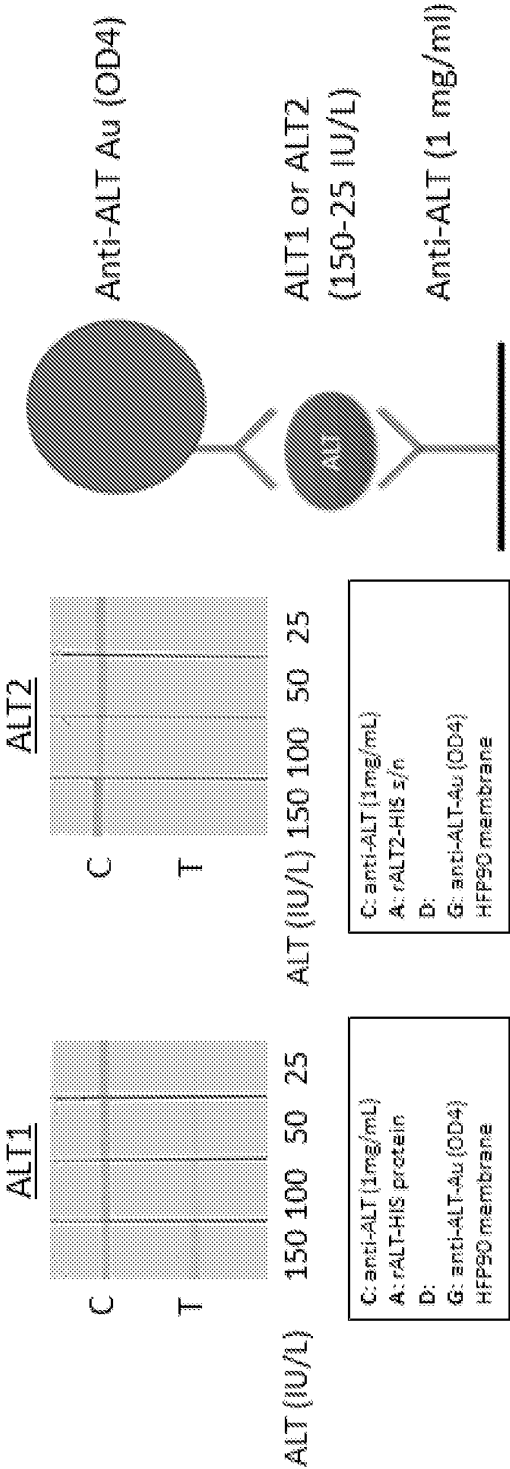
ALT capture ELISA – ALT1 vs ALT2



Specificity of ALT1 binding assay (ELISA) for ALT1 and lack of reactivity for enzymatically equivalent levels of ALT2.

FIG. 12

ALT Rapid – ALT1 vs ALT2



Specificity of ALT1 binding assay (immunochromatographic strip) for ALT1 and lack of reactivity for enzymatically equivalent levels of ALT2.

FIG. 13