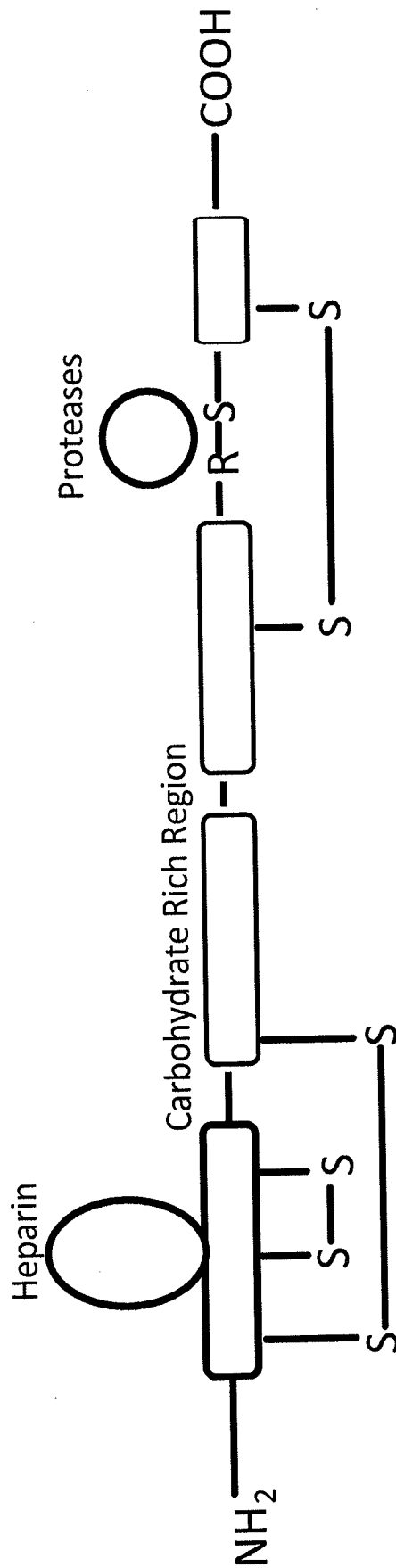


FIG. 1



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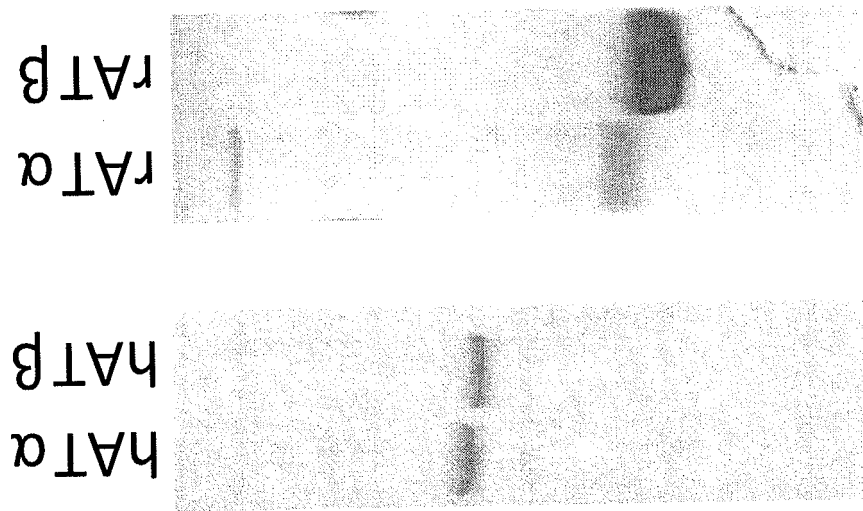
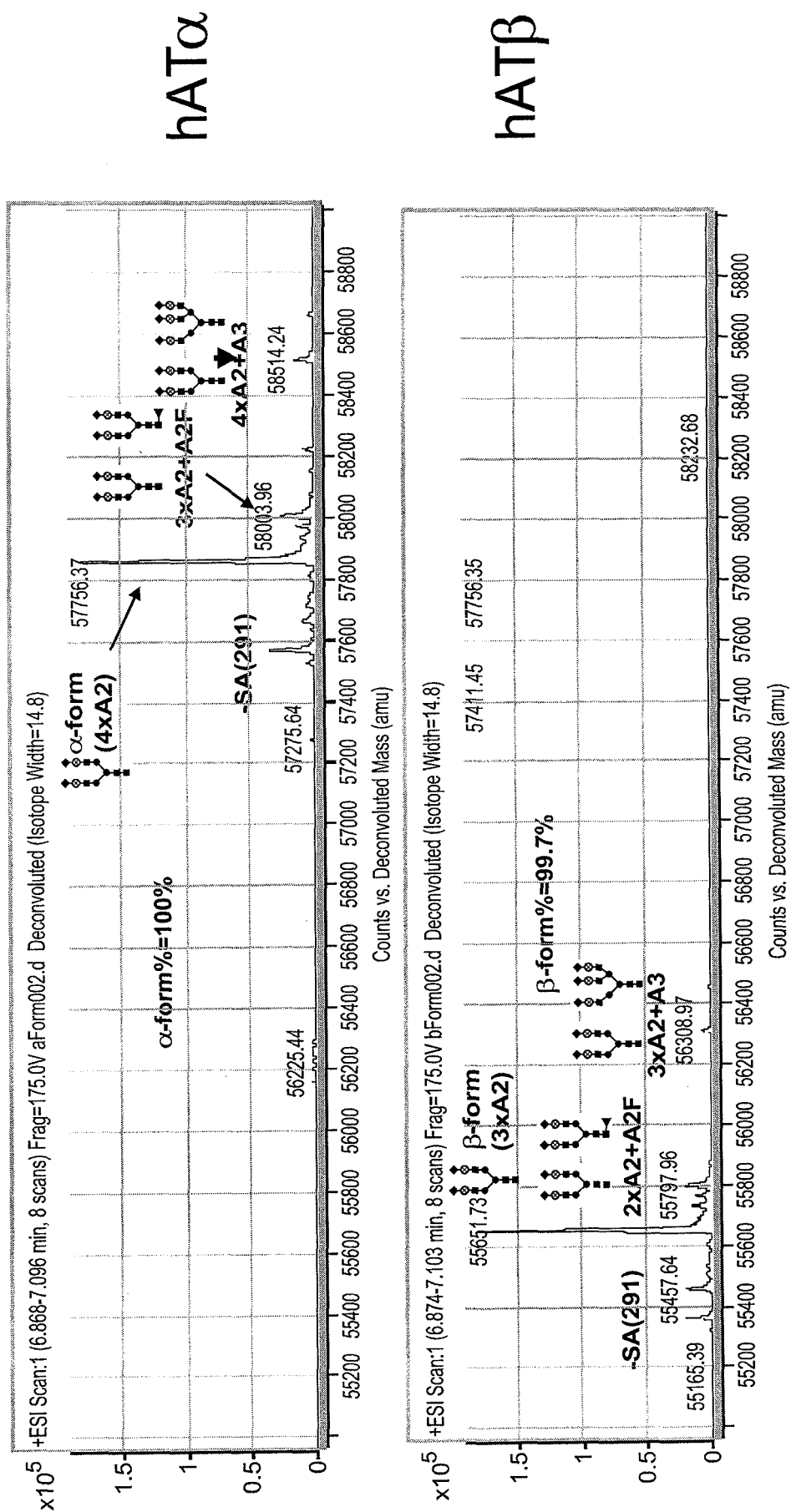


FIG. 2A

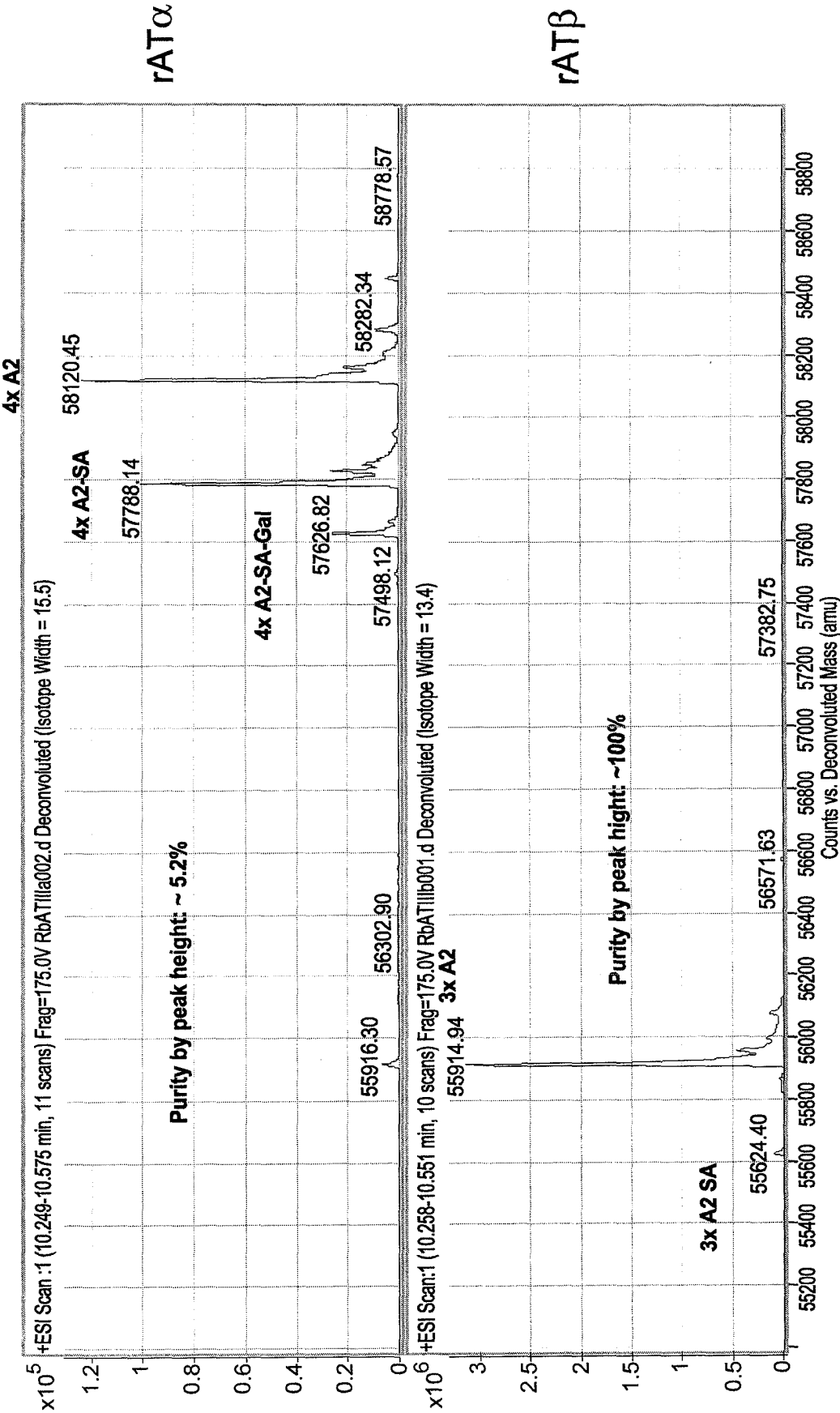
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FIG. 2B



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FIG. 2C



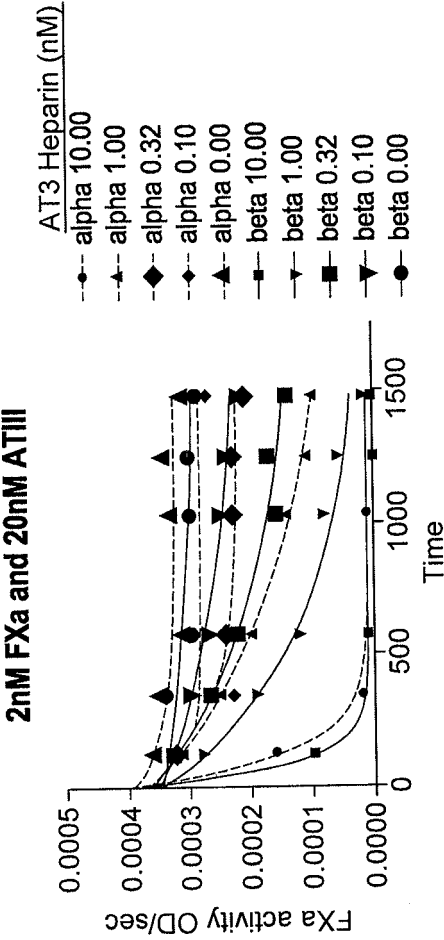


FIG. 3A

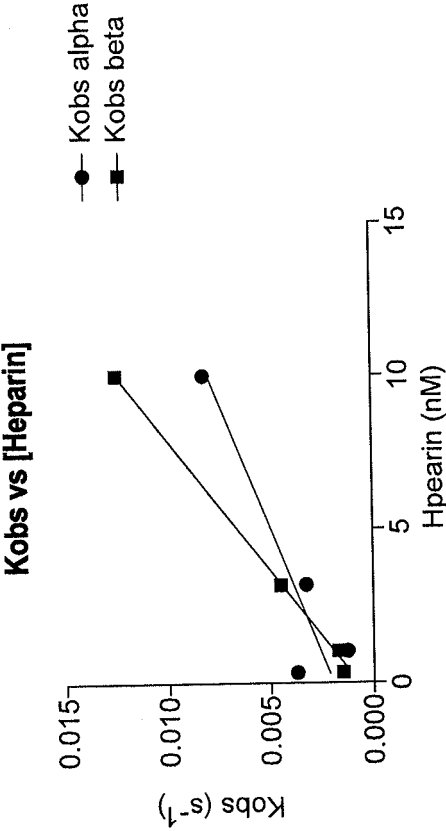
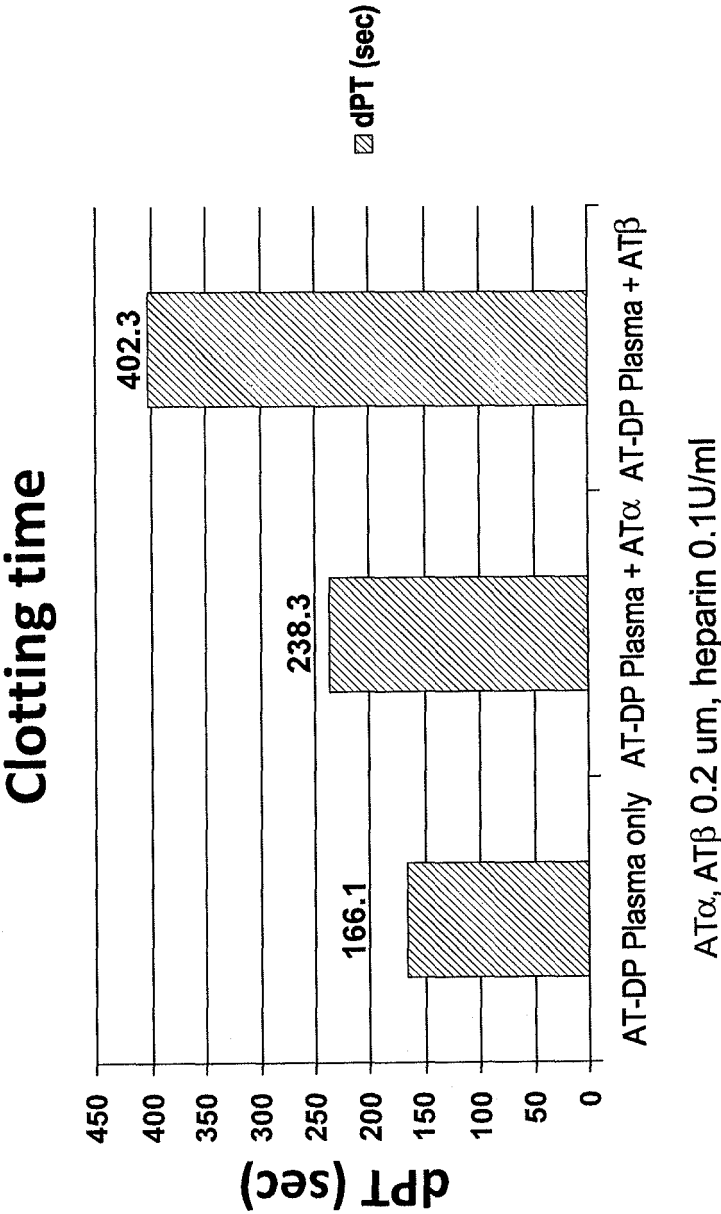


FIG. 3B

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FIG. 3C



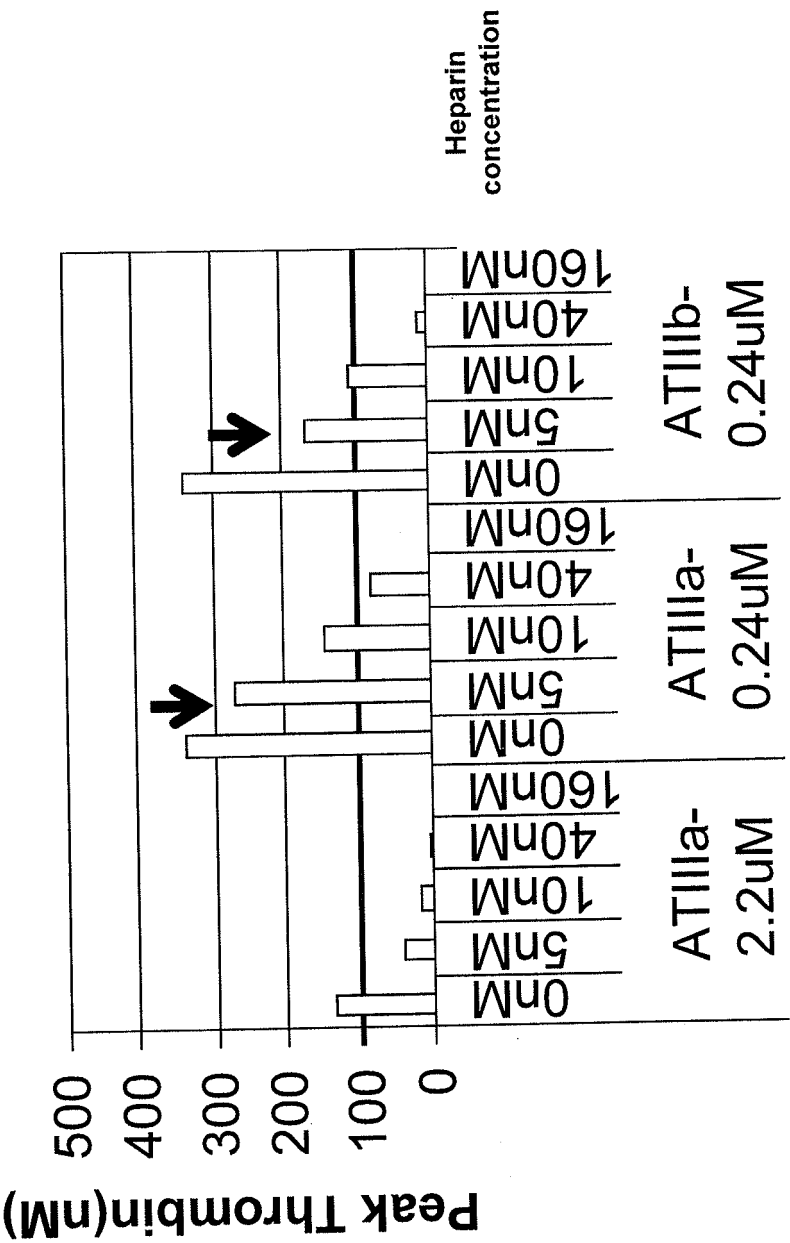
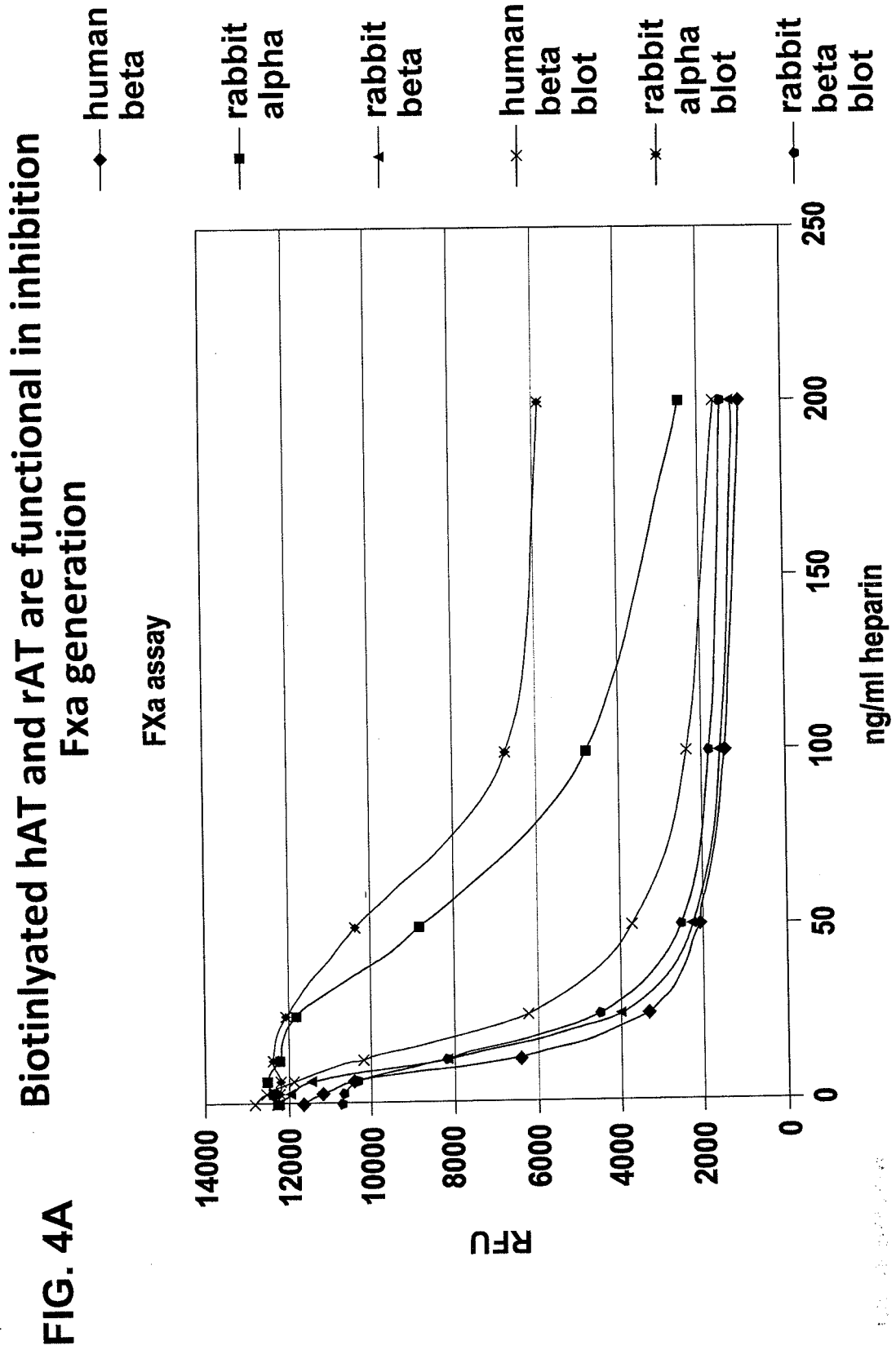


FIG. 3D

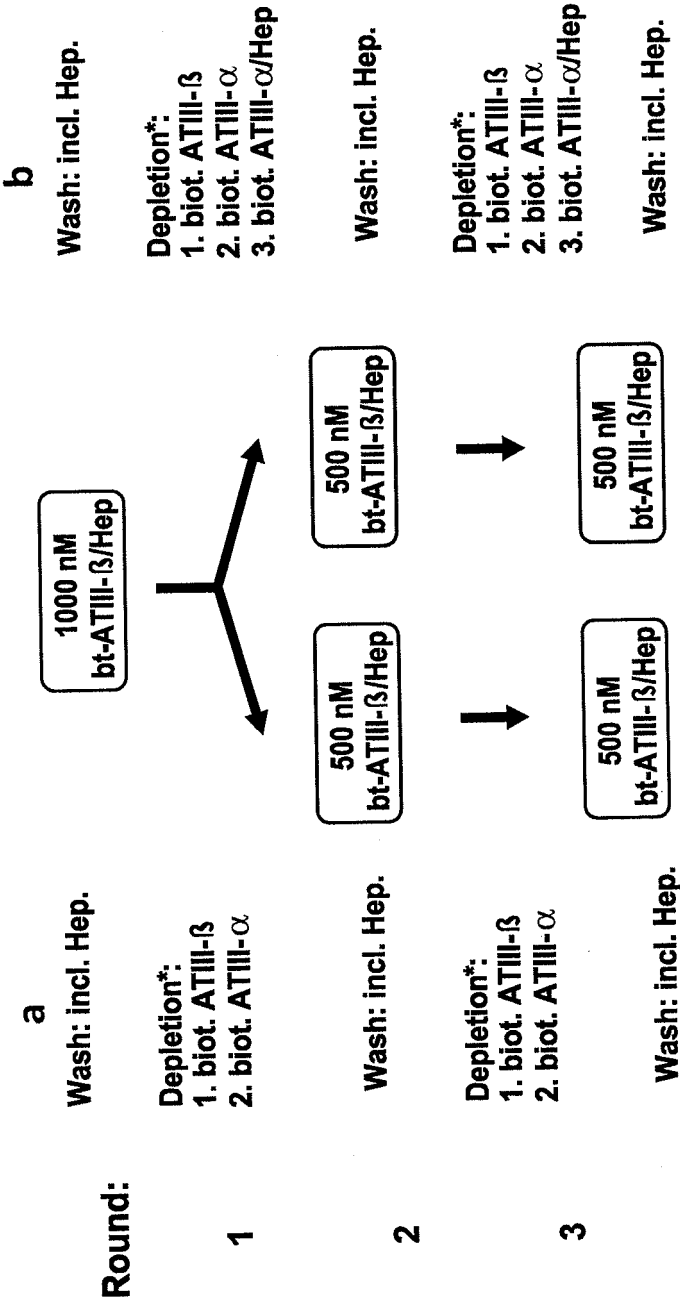
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FIG. 4B

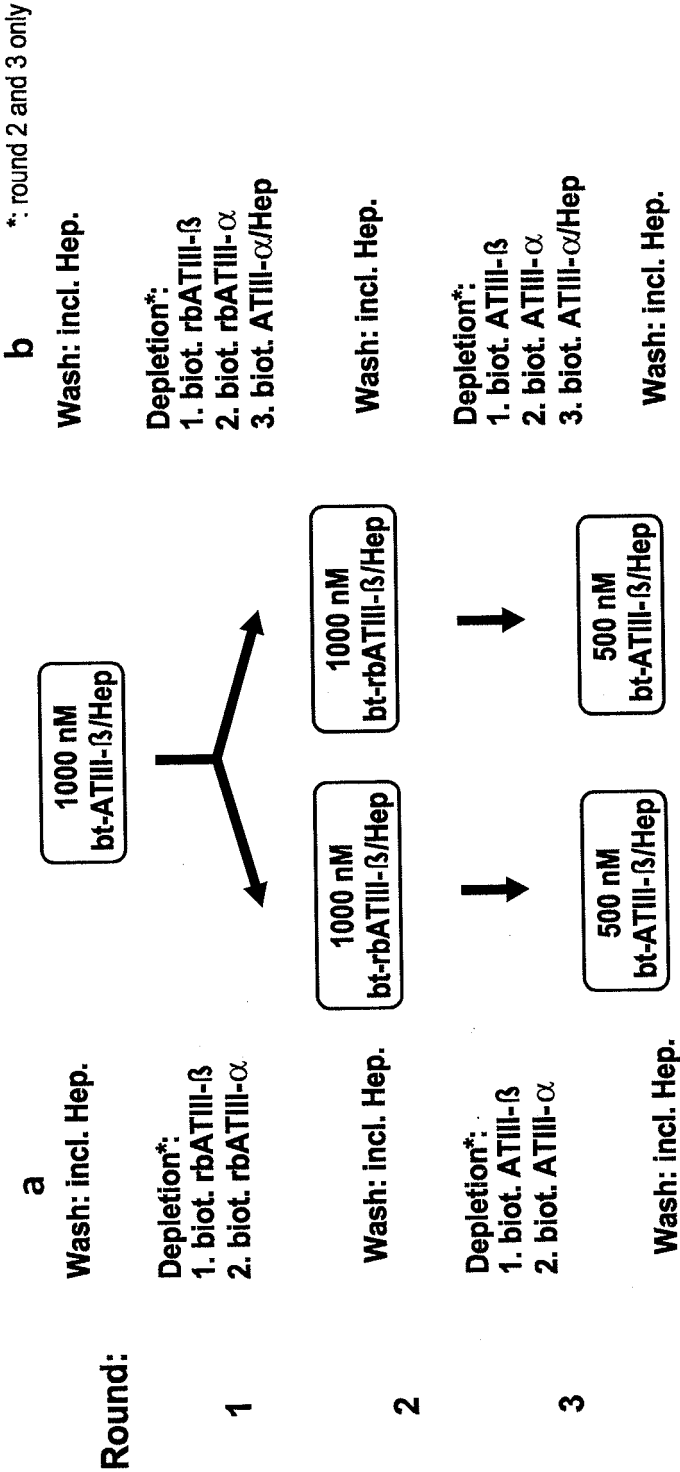
Strategy I: on biot. AT β -Hcomplex



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FIG. 4C

Strategy II: on biot. ATβ -H complex, including rabbit protein



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FIG. 5

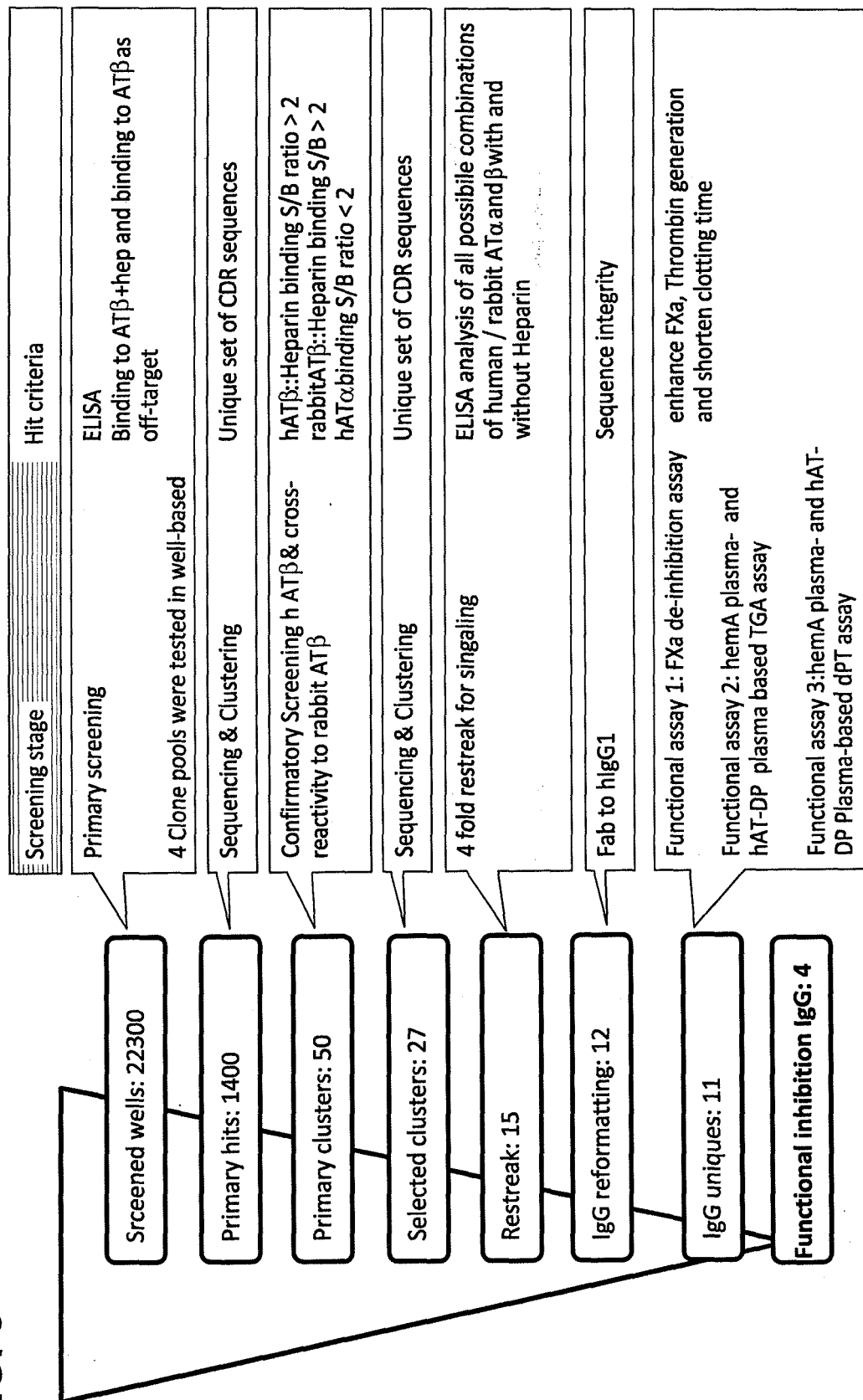


FIG. 6A

Light Chain

TPP-2016|091E-M046-H07-h1g|11
 TPP-2015|091E-M044-B02-h1g|11
 TPP-2019|091E-M067-Q08-h1g|11
 TPP-2803|091E-M037-F02-LC-dela
 TPP-2009|091E-M037-F02-h1g|11

TPP-2016|091E-M046-H07-h1g|11
 TPP-2015|091E-M044-B02-h1g|11
 TPP-2019|091E-M067-Q08-h1g|11
 TPP-2803|091E-M037-F02-LC-dela
 TPP-2009|091E-M037-F02-h1g|11

TPP-2016|091E-M046-H07-h1g|11
 TPP-2015|091E-M044-B02-h1g|11
 TPP-2019|091E-M067-Q08-h1g|11
 TPP-2803|091E-M037-F02-LC-dela
 TPP-2009|091E-M037-F02-h1g|11

TPP-2016|091E-M046-H07-h1g|11
 TPP-2015|091E-M044-B02-h1g|11
 TPP-2019|091E-M067-Q08-h1g|11
 TPP-2803|091E-M037-F02-LC-dela
 TPP-2009|091E-M037-F02-h1g|11

TPP-2016|091E-M046-H07-h1g|11
 TPP-2015|091E-M044-B02-h1g|11
 TPP-2019|091E-M067-Q08-h1g|11
 TPP-2803|091E-M037-F02-LC-dela
 TPP-2009|091E-M037-F02-h1g|11

LCDR1

AQDIQMTQSPAILSVSPGERATILSCRASQINRN-ILAWYQQKPGAPRL 49
 AQDIQMTQSPGILSLSPGERATILSCRASQSVSSYLAWYQQKPGAPRL 50
 AQDIQMTQSPAILSLSPGERATILSCRASQSVSSYLAWYQQKPGAPRL 50
 --SSELTQDP-AVSVALGQTVRIITQD-DSLSRYASWYQQKPGQAPVLV 46
 -AQSVLIQDP-AVSVALGQTVRIITQD-DSLSRYASWYQQKPGQAPVLV 47
 :*: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *

LCDR2

IHTASTRAEGVFVRITGSGSGIEFILIISSLEPEDFAVYFCQQYASPP-- 97
 IYGASSRAIGIPDRFSGSGCIDFILIISRIEPEDEFAVYFCQQYGS-- 97
 IYGASSRAIGIPDRFSGSGCIDFILIISRIEPEDEFAVYFCQQYDSIFP- 99
 IYGNMRRPFGIPDRFSGSSSGNTASLITIGQAEDADYYCNSRDSSGNH 96
 IYGNMRRPFGIPDRFSGSSSGNTASLITIGQAEDADYYCNSRDSSGNH 97
 *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *

LCDR3

RIFGQGIKVEIK-RTVAAPSVTIFPPSDEQLKSGTASVCLLNNFYPREA 146
 RIFGQGIKVEIR-RTVAAPSVTIFPPSDEQLKSGTASVCLLNNFYPREA 146
 LIFGGGKIKVEIK-RTVAAPSVTIFPPSDEQLKSGTASVCLLNNFYPREA 148
 LVFGGGIKLIVLGQPKAPSVTIFPPSDEQLKSGTASVCLLNNFYPREA 146
 LVFGGGIKLIVLGQPKAPSVTIFPPSDEQLKSGTASVCLLNNFYPREA 147
 *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *

KVQNKVDNALQSGNSQESVTEQDSKDSIYSLSSTILISKADYEKHKVYAC 196
 KVQNKVDNALQSGNSQESVTEQDSKDSIYSLSSTILISKADYEKHKVYAC 196
 KVQNKVDNALQSGNSQESVTEQDSKDSIYSLSSTILISKADYEKHKVYAC 198
 IVANWADGSPVKAAGVEITKPSKQS-NNKYAASSYLSLTPEQWKSHRSYSYC 195
 IVANWADGSPVKAAGVEITKPSKQS-NNKYAASSYLSLTPEQWKSHRSYSYC 196
 *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *

EVTHQGLSSPVTKSENREGEC- 216
 EVTHQGLSSPVTKSENREGEC- 216
 EVTHQGLSSPVTKSENREGEC- 218
 QVTHEG--STVEKIVAPAECS 214
 QVTHEG--STVEKIVAPAECS 215
 :*: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *: *

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FIG. 6B

Heavy Chain

TPP-2803|091E-M037-F02-LC-dela
 TPP-2009|091E-M037-F02-hig|he
 TPP-2016|091E-M046-H07-hig|he
 TPP-2015|091E-M044-B02-hig|he
 TPP-2019|091E-M067-O08-hig|he

TPP-2803|091E-M037-F02-LC-dela
 TPP-2009|091E-M037-F02-hig|he
 TPP-2016|091E-M046-H07-hig|he
 TPP-2015|091E-M044-B02-hig|he
 TPP-2019|091E-M067-O08-hig|he

TPP-2803|091E-M037-F02-LC-dela
 TPP-2009|091E-M037-F02-hig|he
 TPP-2016|091E-M046-H07-hig|he
 TPP-2015|091E-M044-B02-hig|he
 TPP-2019|091E-M067-O08-hig|he

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HCDR1

EVQLLESGGGLVQPGGSLRLSCAASGFTF\$SYRMSWVRQAPGKGLEWV\$R 50
 EVQLLESGGGLVQPGGSLRLSCAASGFTF\$AYRMGWVRQAPGKGLEWV\$R 50
 EVQLLESGGGLVQPGGSLRLSCAASGFTF\$KYRMDWVRQAPGKGLEWV\$R 50
 EVQLLESGGGLVQPGGSLRLSCAASGFTF\$KYKMDWVRQAPGKGLEWV\$R 50
 EVQLLESGGGLVQPGGSLRLSCAASGFTF\$RYAMWVRQAPGKGLEWV\$R 50
 ***** * * *****

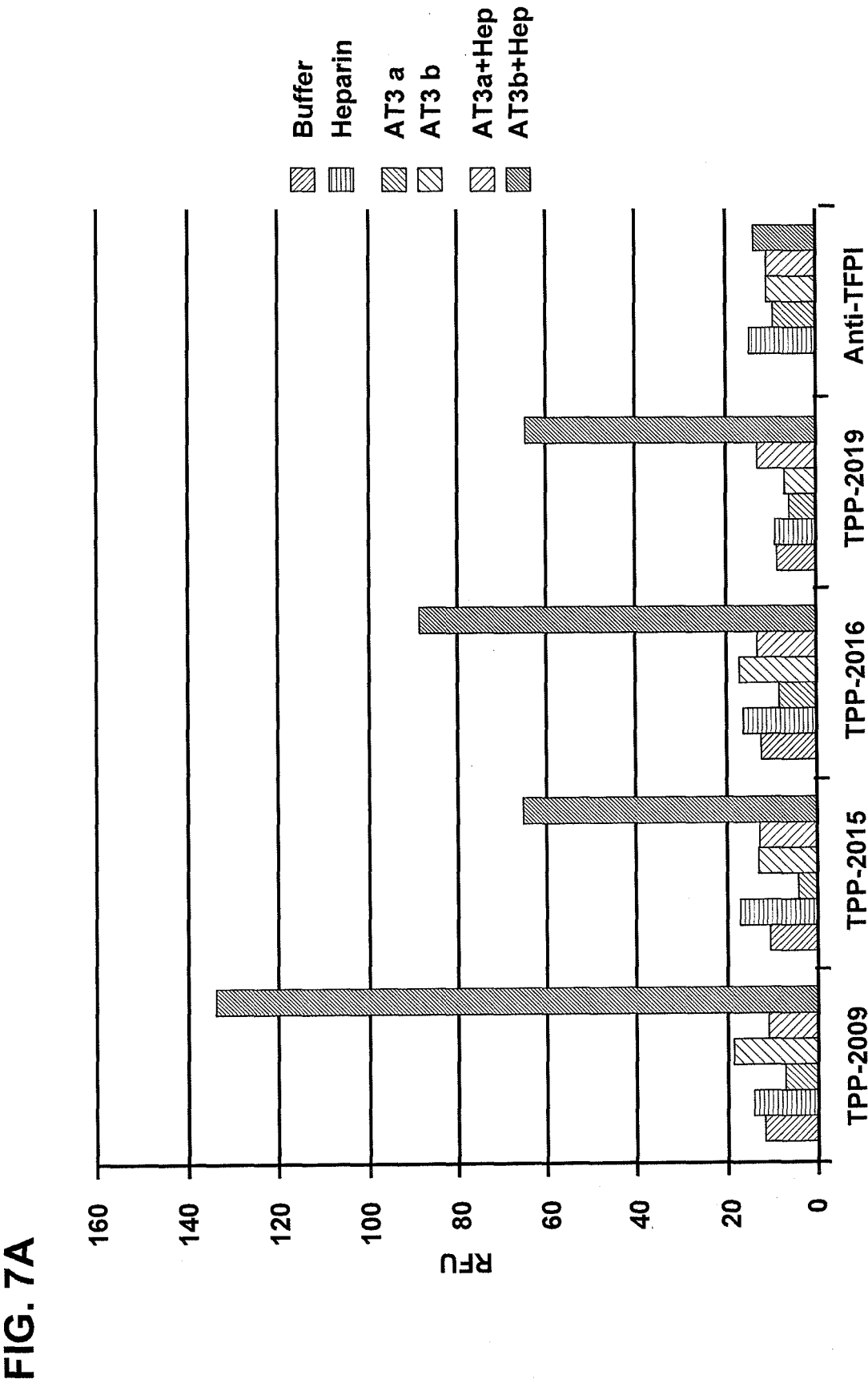
HCDR2

IYSSGGRTRYADSVKGRFTISRDN\$KNTLYLQMN\$SLRAEDTAVY\$CAREK 100
 IYSSGGRTRYADSVKGRFTISRDN\$KNTLYLQMN\$SLRAEDTAVY\$CAREK 100
 IGPSGKTTYADSVKGRFTISRDN\$KNTLYLQMN\$SLRAEDTAVY\$CAREK 100
 IGPSGKTTYADSVKGRFTISRDN\$KNTLYLQMN\$SLRAEDTAVY\$CAREK 100
 IYSSGGRTRYADSVKGRFTISRDN\$KNTLYLQMN\$SLRAEDTAVY\$CAREK 100
 ***** * * *****

HCDR3

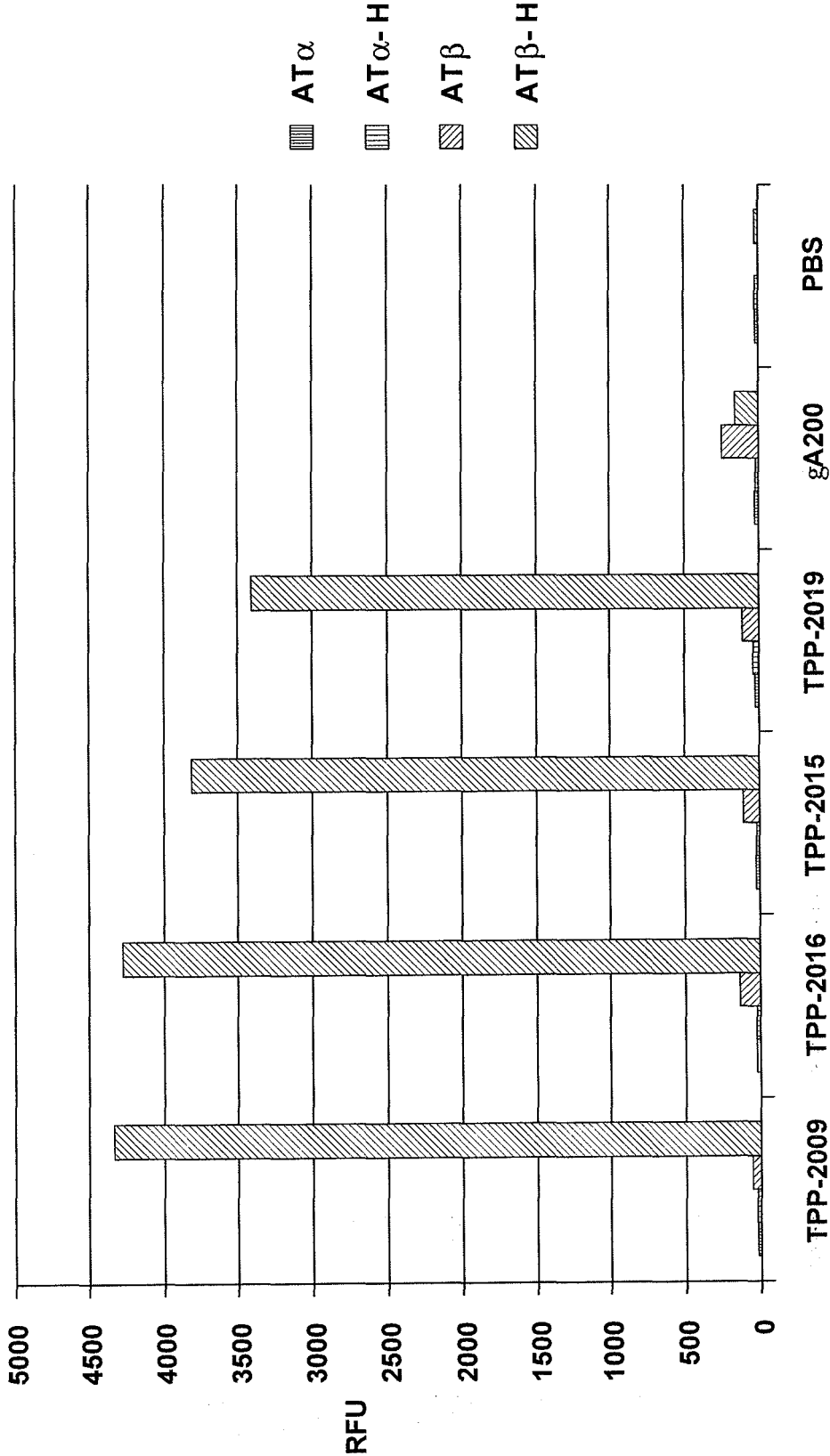
ASDLSGSFS-EALDYWGQGLTVTVSS 125
 ASDLSGSFS-EALDYWGQGLTVTVSS 125
 TSDLSGSYS-EALDYWGQGLTVTVSS 125
 ASDLSGTYS-EALDYWGQGLTVTVSS 125
 QTGYYPHYHYGMDVWGQGLTVTVSS 126
 :. : :. * * * * *

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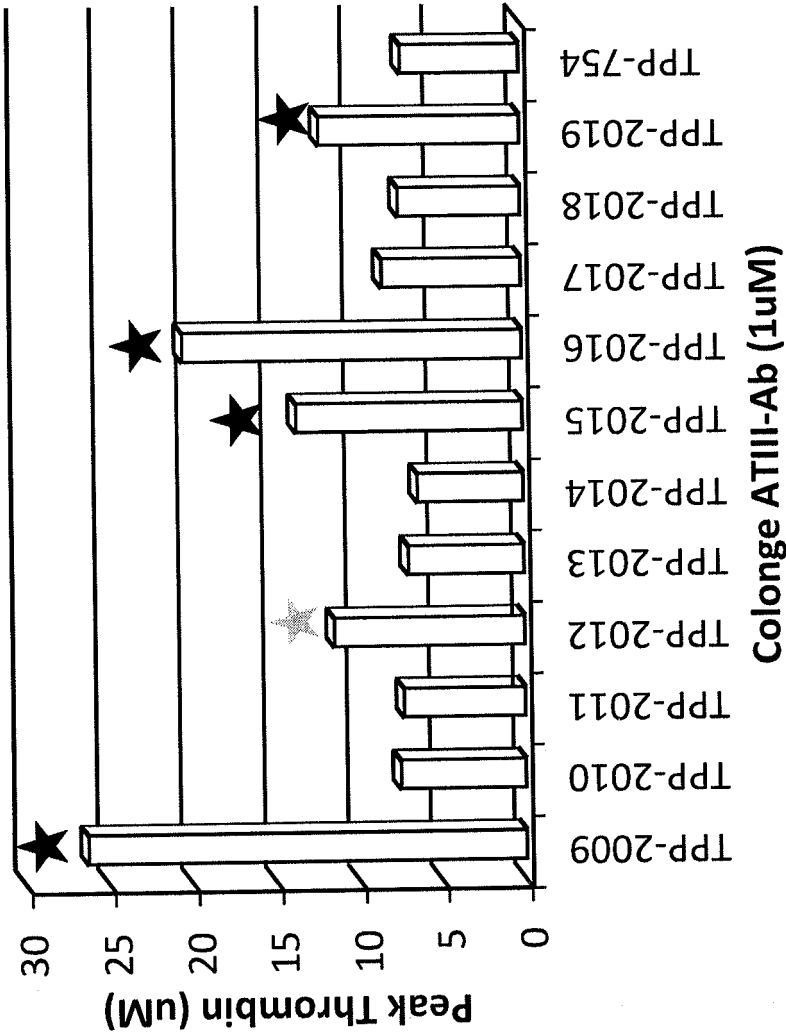
FIG. 7B



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FIG. 7C

Antibody	Ka	Kd	KD (nm)
TPP 2009	1.07E+05	1.27E-03	11.9
TPP 2015	3.95E+04	1.09E-03	27.7
TPP 2016	6.05E+04	1.15E-03	18.9
TPP 2019	8.11E+04	1.39E-03	17.2



Heparin: 50nM
TGA activator: PPP high- 5pM TF

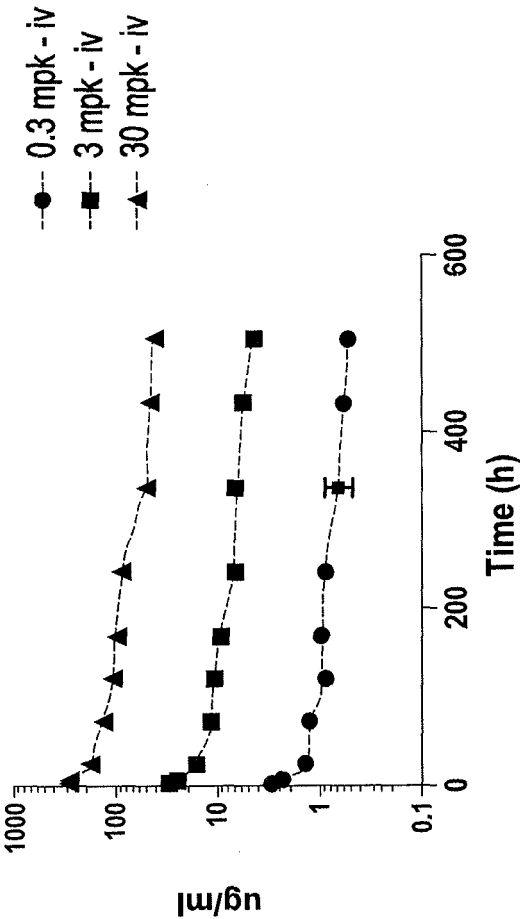
FIG. 8A

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FIG. 8B

	FVIII-DP	AT-DP +ATIIIa	AT-DP +ATIIIb
Plasma only	210.0	165.2	167.0
Plasma + ATIIIa	--	238.3	--
Plasma + ATIIIb	--	--	402.6
TPP2009	176.7	233.0	237.9
TPP2010	199.1	237.7	356.3
TPP2011	205.9	234.8	380.7
TPP2012	218.7	278.9	320.6
TPP2013	206.5	241.5	366.1
TPP2014	213.0	240.5	383.0
TPP2015	199.7	229.7	316.3
TPP2016	183.4	230.6	272.5
TPP2017	203.2	242.6	332.9
TPP2018	202.8	239.6	373.3
TPP2019	195.8	233.0	322.8
TPP754 (control)	204.3	237.1	385.2

FIG. 9



PK parameters of antibody TPP 2009 in HEM-A mice IV dosing at 0.3, 3, and 30 mg/kg

dose mg/kg	HL_Lambda_z h	MRTINF_prod h	AUC_%Extrap_prod %	AUCall h*ug/ml	AUCINF_prod h*ug/ml	CL_prod ml/h/kg	Vz_prod ml/kg
0.3 - iv	340	479	35	467	720	0.42	204
3 - iv	368	497	36	4556	7127	0.42	224
30 - iv	259	349	24	46734	61814	0.49	182

FIG. 10A

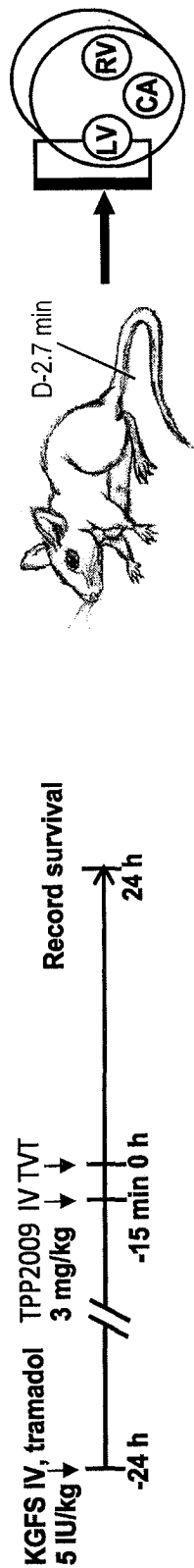


FIG. 10B

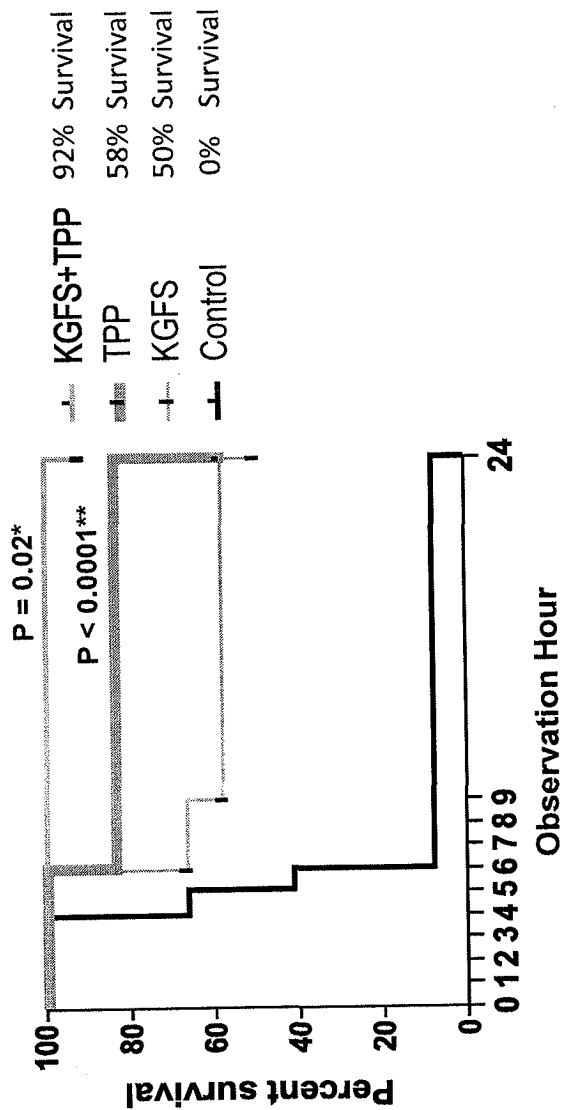


Figure 10B

N=12 mice /per group

P value, the Log-rank (Mantel-Cox) Test

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FIG. 11B



FIG. 11A



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FIG. 12

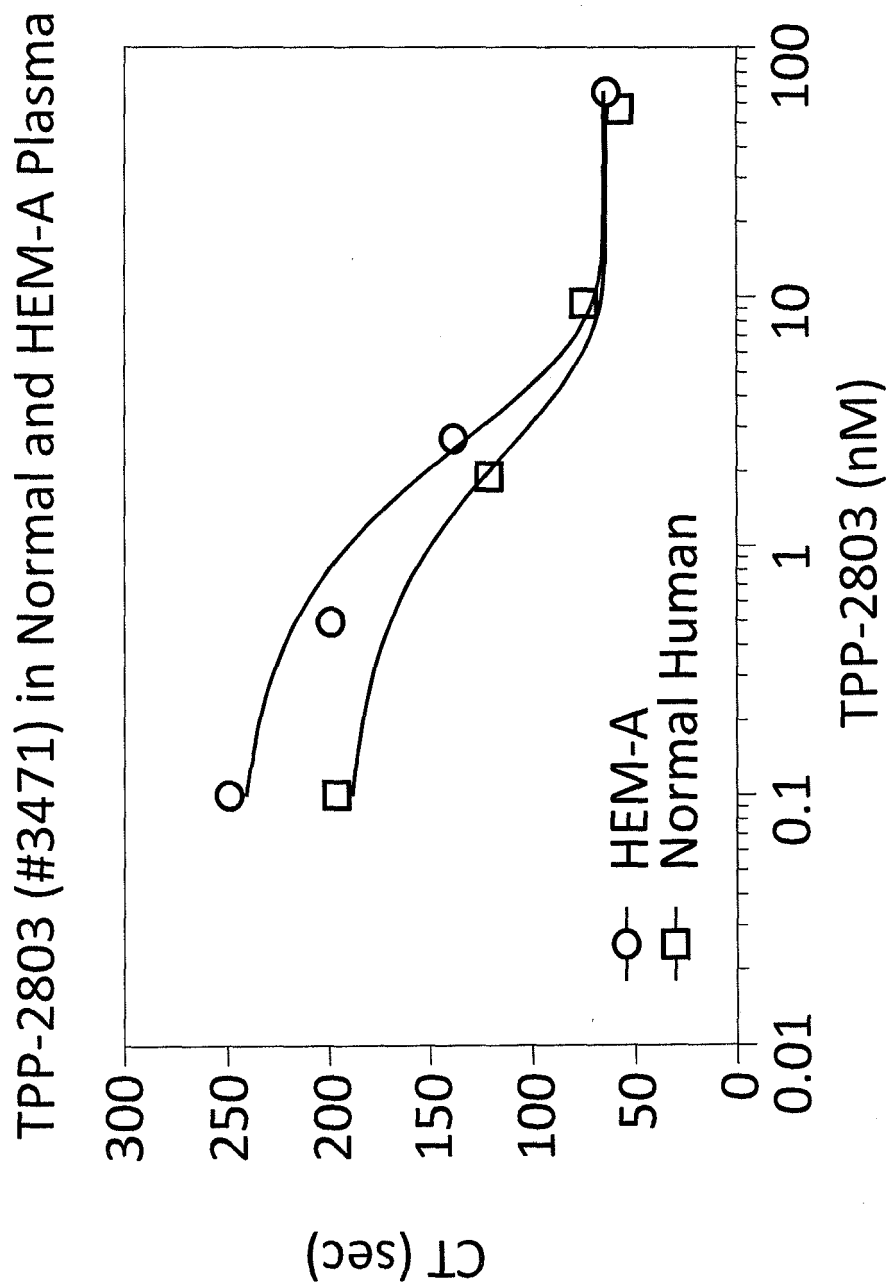
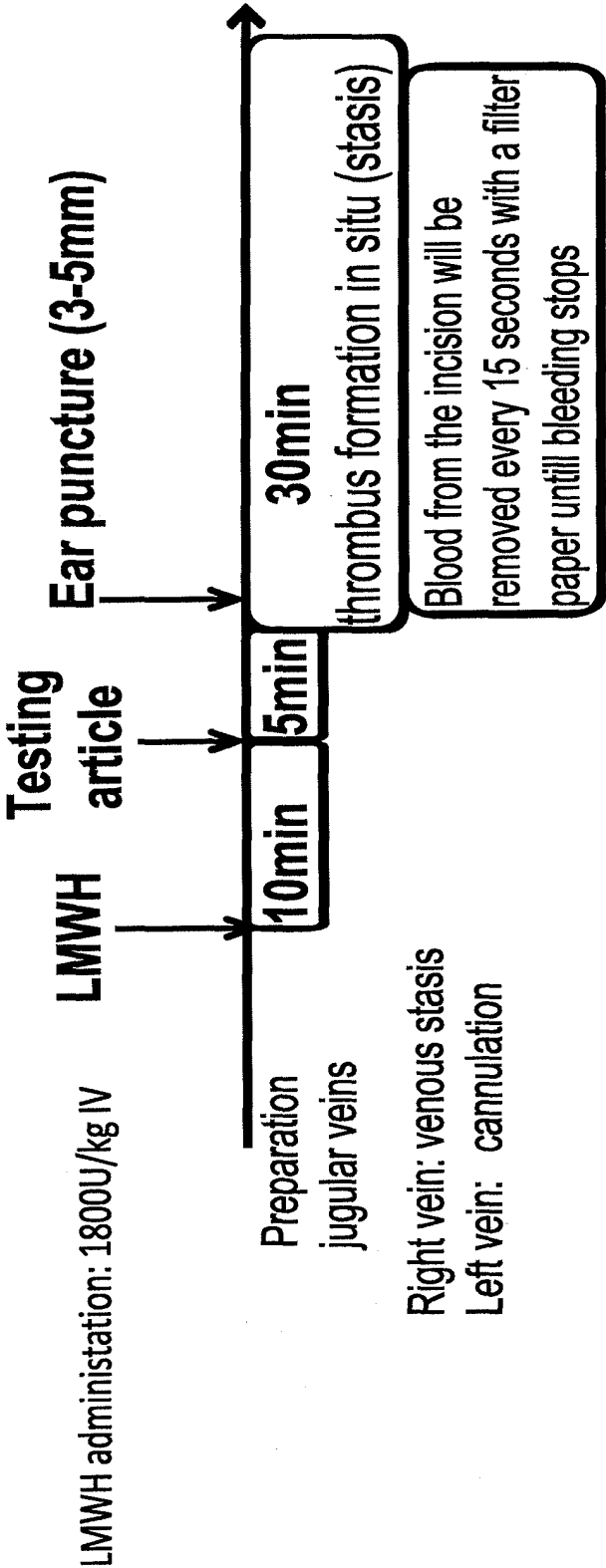
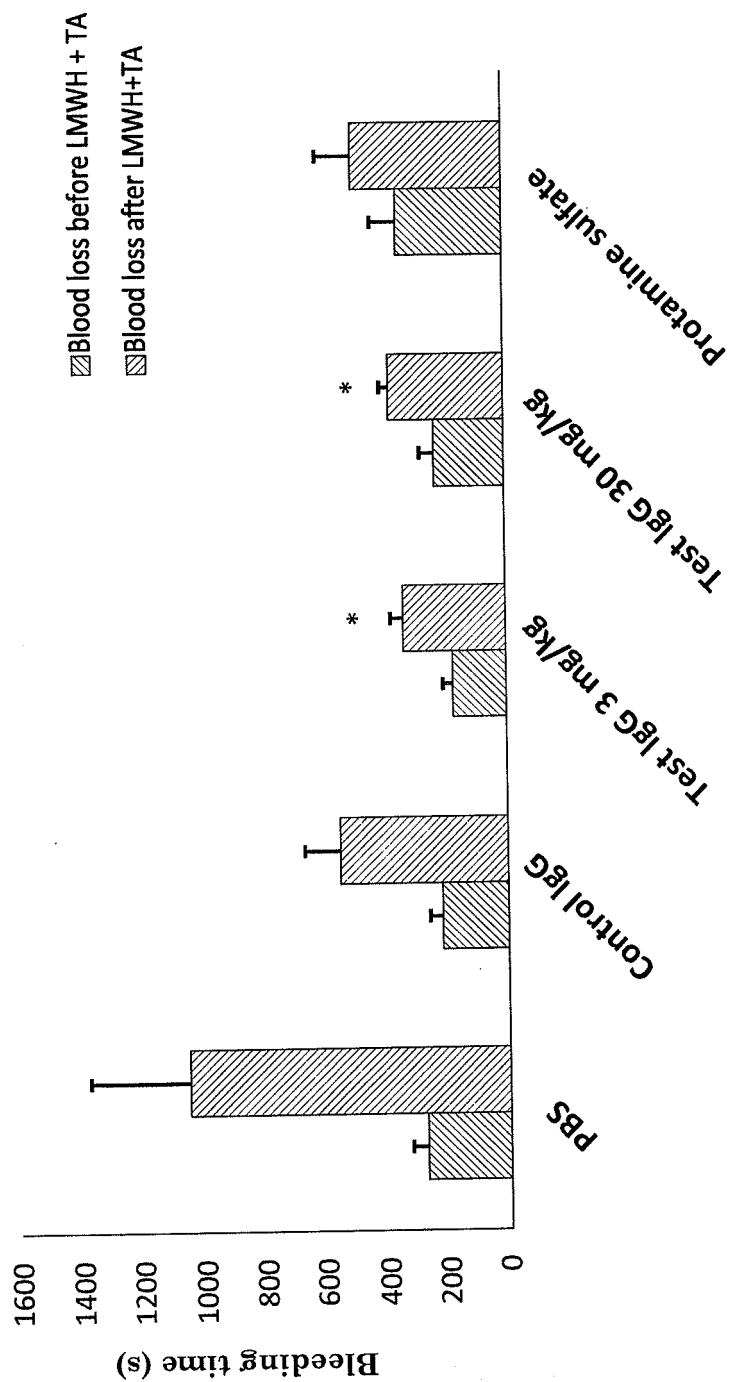


FIG. 13



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*Significantly different from PBS ($p \leq 0.05$)

FIG. 14

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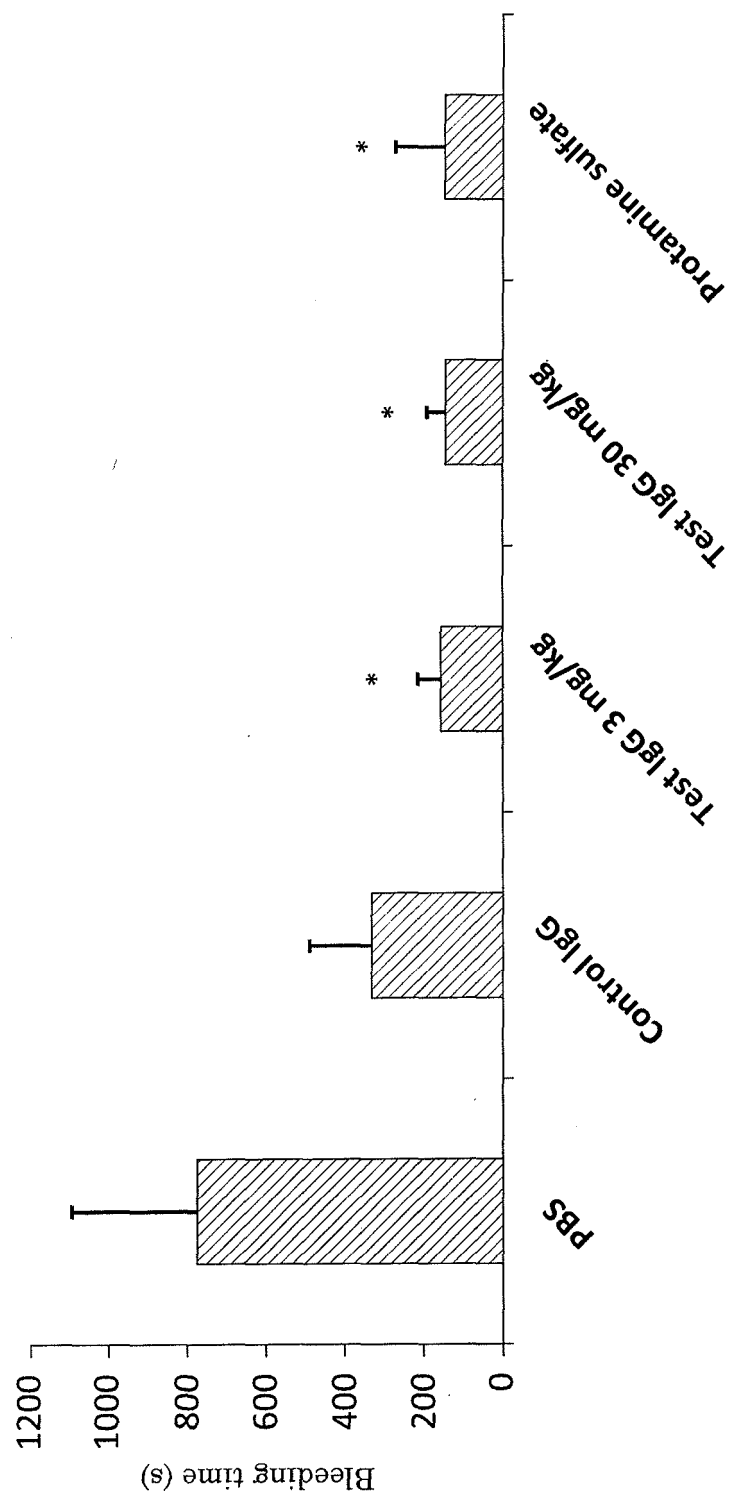
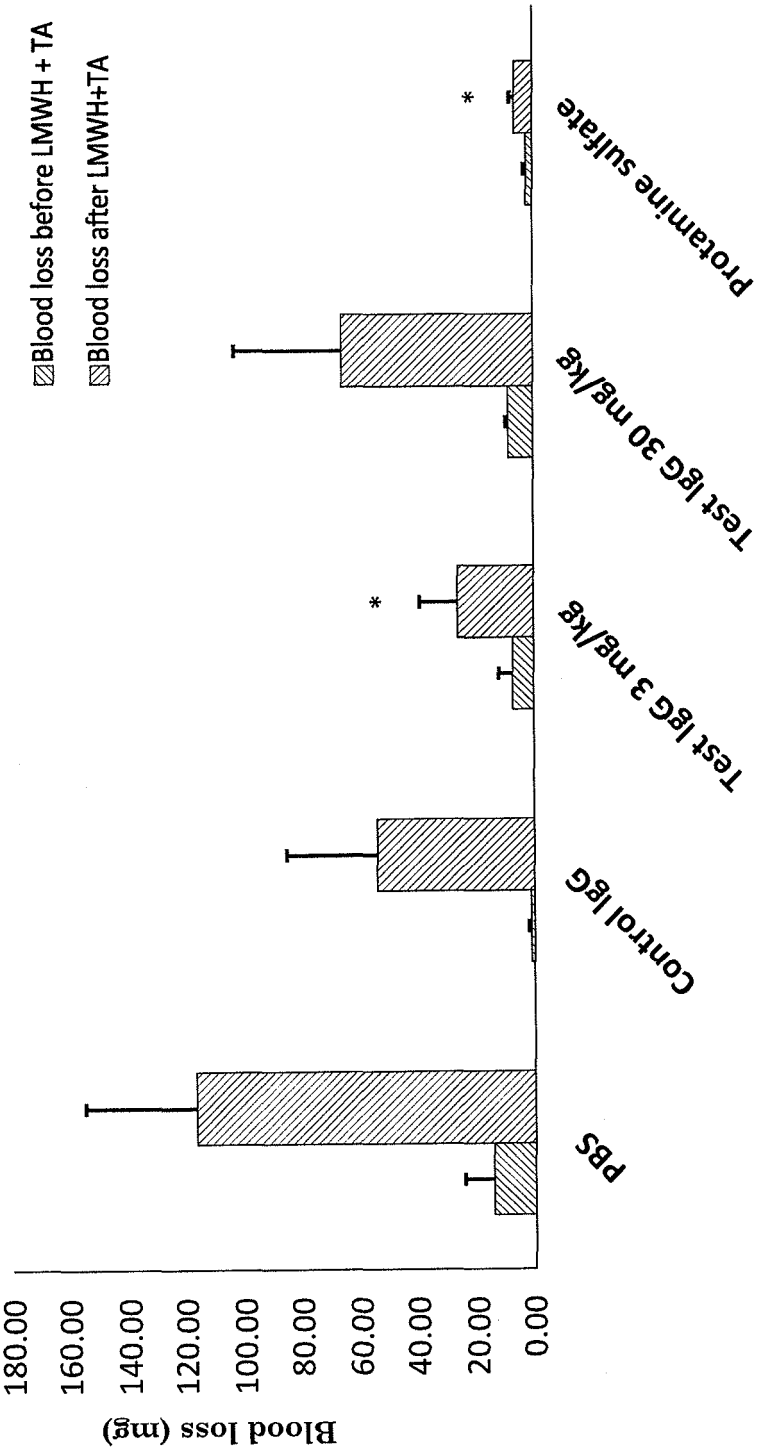
*Significantly different from PBS ($p \leq 0.05$)

FIG. 15

FIG. 16



*Significantly different from PBS ($p \leq 0.05$)