

FIG. 1

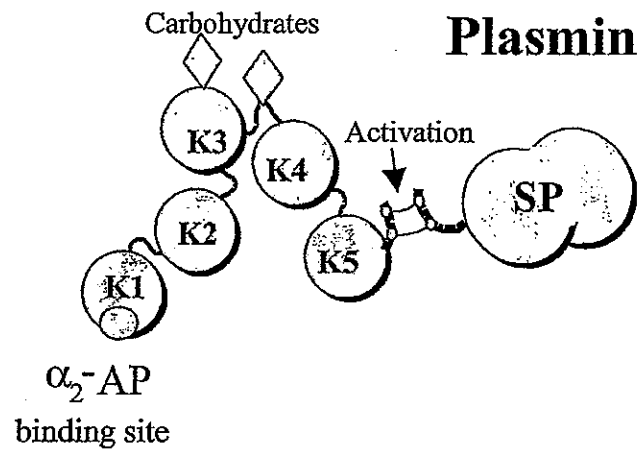


FIG. 2

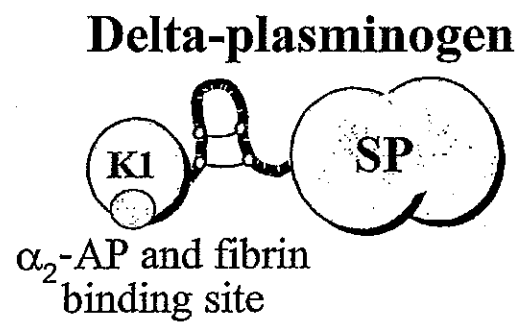


FIG. 3

-19 1
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78
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136 143 153 162
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kringle 1

K I S K T M S G L E C Q A W D S Q S P H A G Y I P S K F P N K N L K N Y C R N P D R E L R P W C F T T D P N K R W E L C D I P
kringle 2

R C T T P P P S S G P T Y Q C L K G T G E N Y R G N V A V T V S G H T C Q H W S A Q T P H T H N R T P E N F P C K N L D E N Y C R
kringle 3

N P D G K R A P W C H T T N S Q V R W E Y C K I P S C D S S P V S T E Q L A P T A P P E L T P V V Q D C Y H G D G S Y R G T S S

T T T T G K K C Q S W S S M T P H R H Q K T P E N Y P N A G L T M N Y C R N P D A D K G P W C F T T D P S V R W E Y C N L K K C S
kringle 4

G T E A S V V A P P P V V L L P D V E T P S E E D C M F G N G K G Y R G K R A T T V T G T P C Q D W A A Q E P H R H S I F T P E T
kringle 5

542
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V A H P H S W E N Q V S L R T R E G M H F C G G T D I S P E N V L T A A H C L E K S P R P S S E K V I L G A H O E V N L E P H V Q

E I E V S R E F F M P T R K D I A L L K L S S P A V I T D K V I P A C L E S P N V V A D R T E C F I T G W G E T O G T F G A G I

L K E A Q L P V T E N K V C N R Y E F I N G R V O S T E L C A G H L A G G T D S C Q G D S G G P L V C F E K D K Y I L Q G V T S W

791
G L G C A R P N K P G V Y V R V S R F V T W I E G V M R N N (SEQ ID NO:4)

FIG. 4

HK1	<u>CKTGNGKNYR</u>	<u>GTMSKTKNGI</u>	<u>TCQKWSSTSP</u>	<u>HR-PRFSPAT</u>	<u>HPSEGLEENY</u>
HK2	<u>CMHCSGENYD</u>	<u>GKISKTMISGL</u>	<u>ECQAWDSQSP</u>	<u>HA-HGYIPSK</u>	<u>FPNKNLKKNY</u>
HK3	<u>CLKGTGENYR</u>	<u>GNVAVTVSGH</u>	<u>TCQHWSAQTP</u>	<u>HT-HNRTPEN</u>	<u>FPCKNLDENY</u>
HK4	<u>CYHGDGQSYR</u>	<u>GTSSSTTTTGK</u>	<u>KQSWSSMTPE</u>	<u>HR-HQKTPEN</u>	<u>YPNAGLTMNY</u>
HK5	<u>CMFGNGKGYR</u>	<u>GKRATTVTGT</u>	<u>PCQDWAAQEP</u>	<u>HRHSIFTPET</u>	<u>NPRAGLEKNY</u>

(con't)

HK1	<u>CRNPDNDPOG</u>	<u>PWCYTDDPEK</u>	<u>RYDYCDILEC</u>	(SEQ ID NO:5)
HK2	<u>CRNPDRE-LR</u>	<u>PWCFTTDPNK</u>	<u>RWELCDIPRC</u>	(SEQ ID NO:6)
HK3	<u>CRNPDGK-RA</u>	<u>PWCHTTNSQV</u>	<u>RWEYCKIPSC</u>	(SEQ ID NO:7)
HK4	<u>CRNPDAD-KG</u>	<u>PWCFTTDPSP</u>	<u>RWEYCNLKKC</u>	(SEQ ID NO:8)
HK5	<u>CRNPDGDVGG</u>	<u>PWCYTTNPRK</u>	<u>LYDYCDVPQC</u>	(SEQ ID NO:9)

FIG. 5

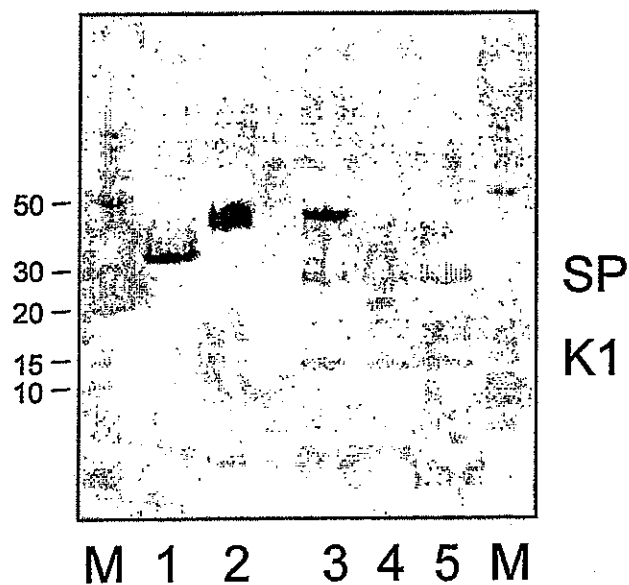


FIG. 6

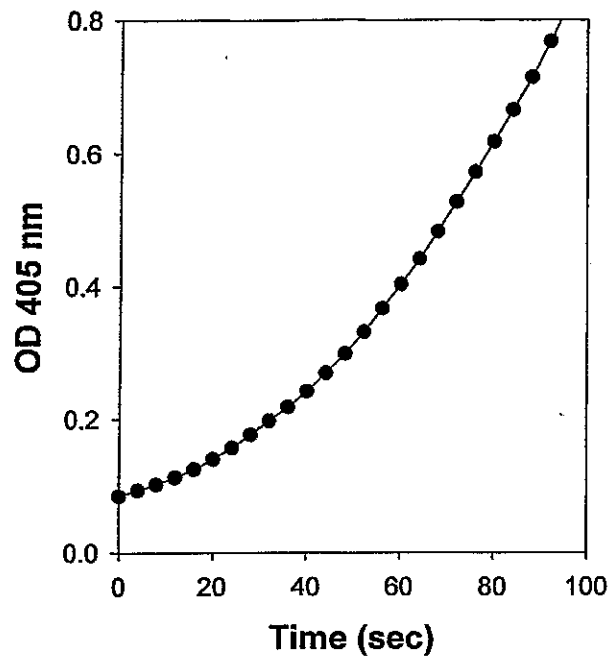


FIG. 7

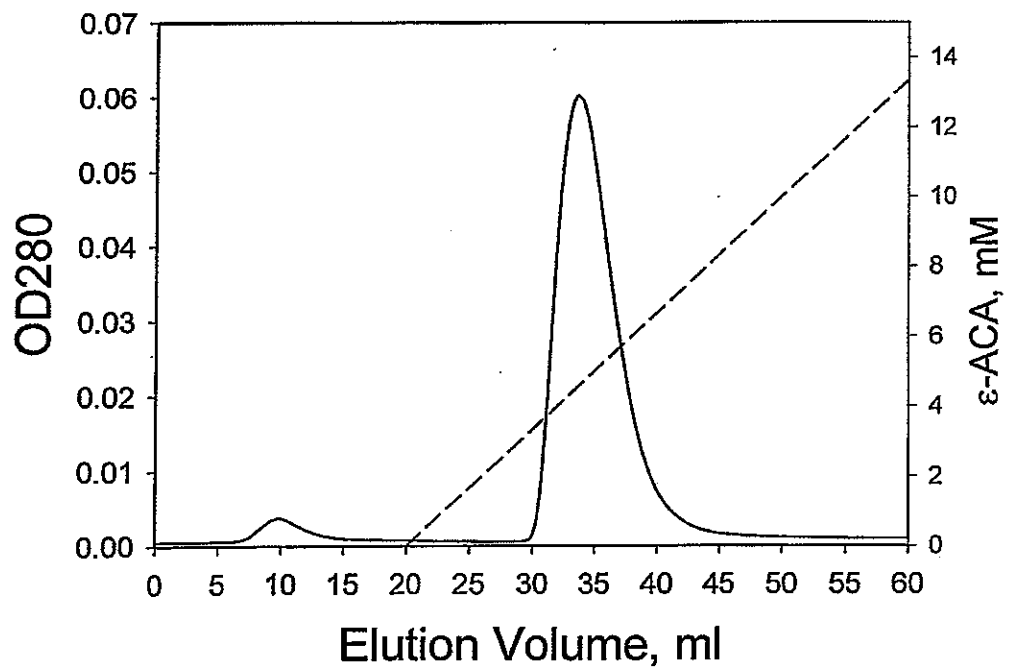


FIG. 8

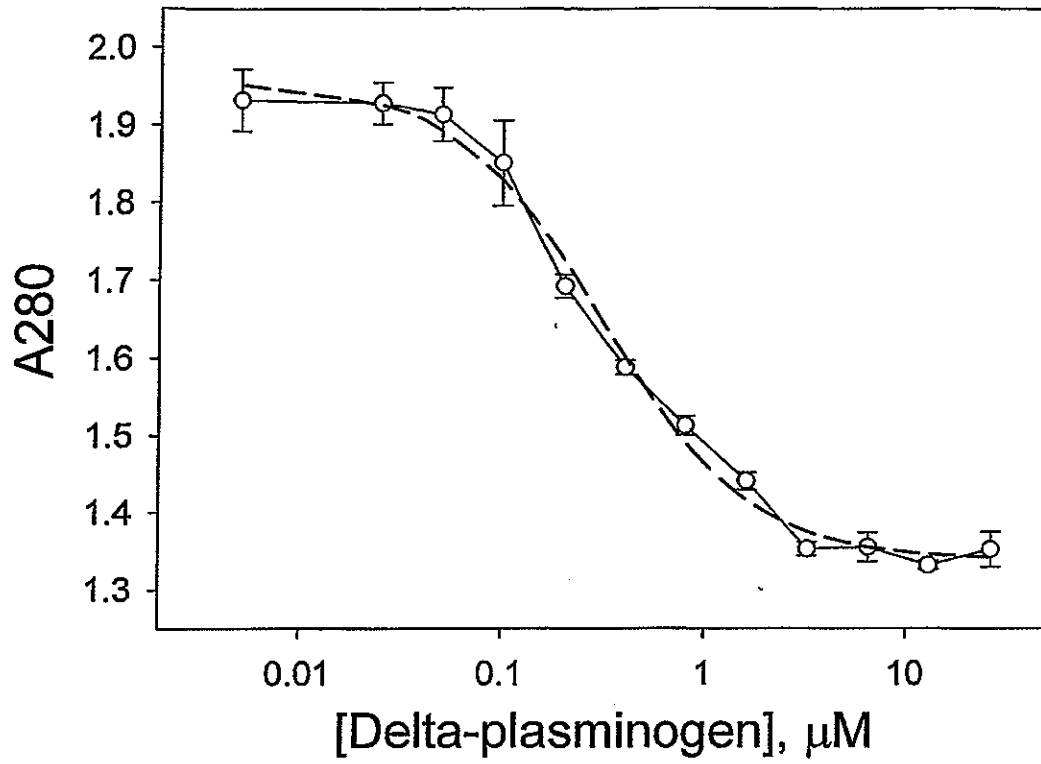


FIG. 9

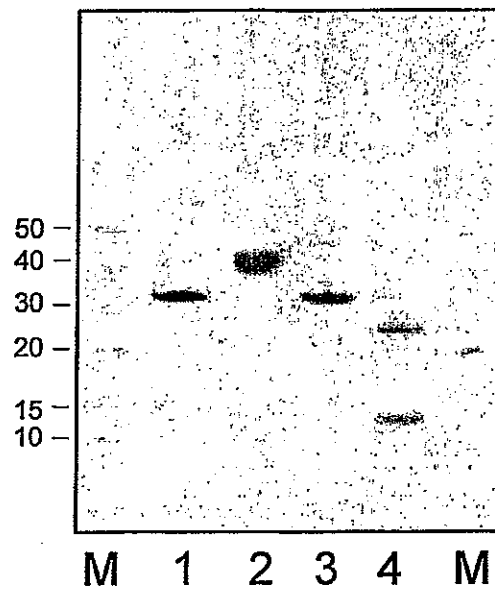
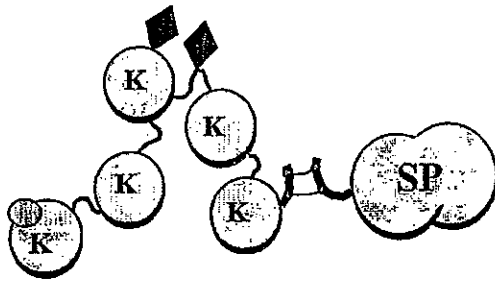


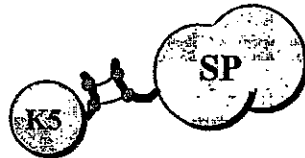
FIG. 10



Plasmin:

K_m 193 $\pm$ 7 μM

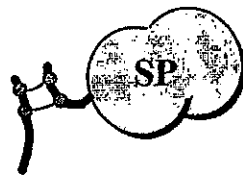
k_{cat} : 760 min^{-1}



Mini-plasmin:

K_m 160 $\pm$ 30 μM

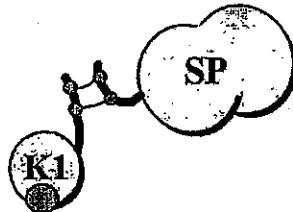
k_{cat} : 770 min^{-1}



Micro-plasmin:

K_m 145 $\pm$ 13 μM

k_{cat} : 795 min^{-1}



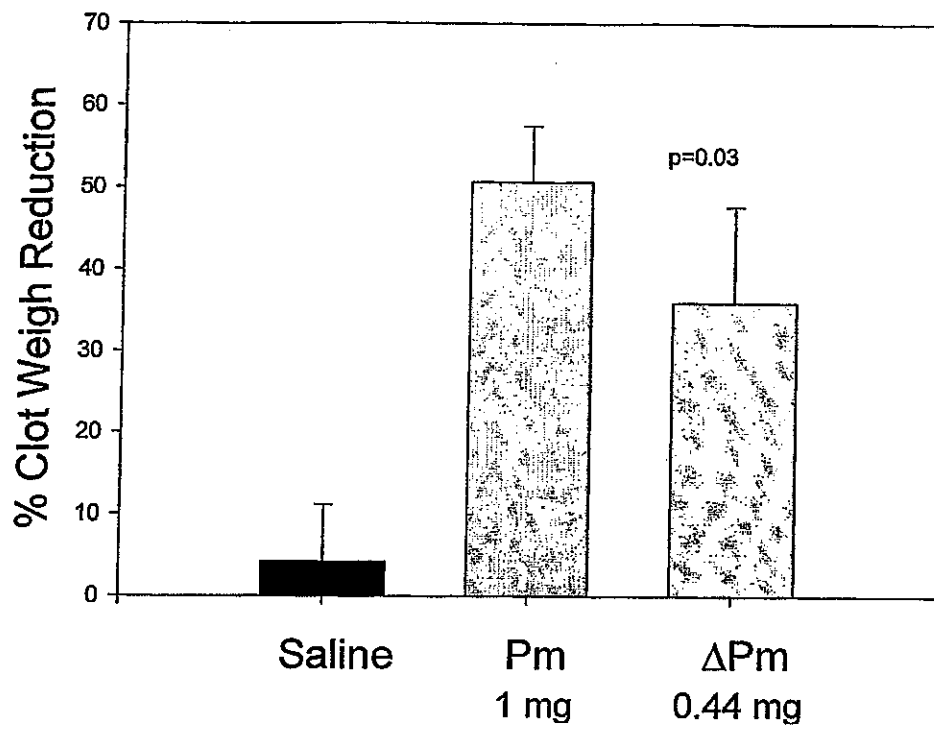
Delta-plasmin:

K_m 138 $\pm$ 5 μM

k_{cat} : 755 min^{-1}

FIG. 11

Summary Graph - 10 clots, 3 donors



SEQUENCE LISTING

<110> Talecris Biotherapeutics, Inc.
Hunt, Jennifer A.
Novokhatny, Valery

<120> Recombinantly Modified Plasmin

<130> B185 1240-PCT(8017)

<150> US 60/564,472

<151> 2004-04-22

<160> 9

<170> FastSEQ for Windows Version 4.0

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          35          40          45
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Gln Tyr His Ser Lys Glu Gln Gln Cys Val Ile Met Ala Glu Asn Arg

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 Leu Pro Val Ile Glu Asn Lys Val Cys Asn Arg Tyr Glu Phe Leu Asn
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 Gly Arg Val Gln Ser Thr Glu Leu Cys Ala Gly His Leu Ala Gly Gly
 740 745 750
 Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Phe Glu
 755 760 765
 Lys Asp Lys Tyr Ile Leu Gln Gly Val Thr Ser Trp Gly Leu Gly Cys
 770 775 780
 Ala Arg Pro Asn Lys Pro Gly Val Tyr Val Arg Val Ser Arg Phe Val
 785 790 795 800
 Thr Trp Ile Glu Gly Val Met Arg Asn Asn
 805 810

<210> 5
 <211> 79
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 5
 Cys Lys Thr Gly Asn Gly Lys Asn Tyr Arg Gly Thr Met Ser Lys Thr
 1 5 10 15
 Lys Asn Gly Ile Thr Cys Gln Lys Trp Ser Ser Thr Ser Pro His Arg
 20 25 30
 Pro Arg Phe Ser Pro Ala Thr His Pro Ser Glu Gly Leu Glu Asn
 35 40 45
 Tyr Cys Arg Asn Pro Asp Asn Asp Pro Gln Gly Pro Trp Cys Tyr Thr
 50 55 60
 Thr Asp Pro Glu Lys Arg Tyr Asp Tyr Cys Asp Ile Leu Glu Cys
 65 70 75

<210> 6
 <211> 78

<212> PRT
<213> Artificial Sequence

<220>
<223> kringle domain 2 of native human plasmin(ogen)

<400> 6
Cys Met His Cys Ser Gly Glu Asn Tyr Asp Gly Lys Ile Ser Lys Thr
1 5 10 15
Met Ser Gly Leu Glu Cys Gln Ala Trp Asp Ser Gln Ser Pro His Ala
20 25 30
His Gly Tyr Ile Pro Ser Lys Phe Pro Asn Lys Asn Leu Lys Lys Asn
35 40 45
Tyr Cys Arg Asn Pro Asp Arg Glu Leu Arg Pro Trp Cys Phe Thr Thr
50 55 60
Asp Pro Asn Lys Arg Trp Glu Leu Cys Asp Ile Pro Arg Cys
65 70 75

<210> 7
<211> 78
<212> PRT
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<220>
<223> kringle domain 3 of native human plasmin(ogen)

<400> 7
Cys Leu Lys Gly Thr Gly Glu Asn Tyr Arg Gly Asn Val Ala Val Thr
1 5 10 15
Val Ser Gly His Thr Cys Gln His Trp Ser Ala Gln Thr Pro His Thr
20 25 30
His Asn Arg Thr Pro Glu Asn Phe Pro Cys Lys Asn Leu Asp Glu Asn
35 40 45
Tyr Cys Arg Asn Pro Asp Gly Lys Arg Ala Pro Trp Cys His Thr Thr
50 55 60
Asn Ser Gln Val Arg Trp Glu Tyr Cys Lys Ile Pro Ser Cys
65 70 75

<210> 8
<211> 78
<212> PRT
<213> Artificial Sequence

<220>
<223> kringle domain 4 of native human plasmin(ogen)

<400> 8
Cys Tyr His Gly Asp Gly Gln Ser Tyr Arg Gly Thr Ser Ser Thr Thr
1 5 10 15
Thr Thr Gly Lys Lys Cys Gln Ser Trp Ser Ser Met Thr Pro His Arg
20 25 30
His Gln Lys Thr Pro Glu Asn Tyr Pro Asn Ala Gly Leu Thr Met Asn
35 40 45
Tyr Cys Arg Asn Pro Asp Ala Asp Lys Gly Pro Trp Cys Phe Thr Thr
50 55 60
Asp Pro Ser Val Arg Trp Glu Tyr Cys Asn Leu Lys Lys Cys
65 70 75

<210> 9
 <211> 80
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 9
 Cys Met Phe Gly Asn Gly Lys Gly Tyr Arg Gly Lys Arg Ala Thr Thr
 1 5 10 15
 Val Thr Gly Thr Pro Cys Gln Asp Trp Ala Ala Gln Glu Pro His Arg
 20 25 30
 His Ser Ile Phe Thr Pro Glu Thr Asn Pro Arg Ala Gly Leu Glu Lys
 35 40 45
 Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Gly Gly Pro Trp Cys Tyr
 50 55 60
 Thr Thr Asn Pro Arg Lys Leu Tyr Asp Tyr Cys Asp Val Pro Gln Cys
 65 70 75 80