

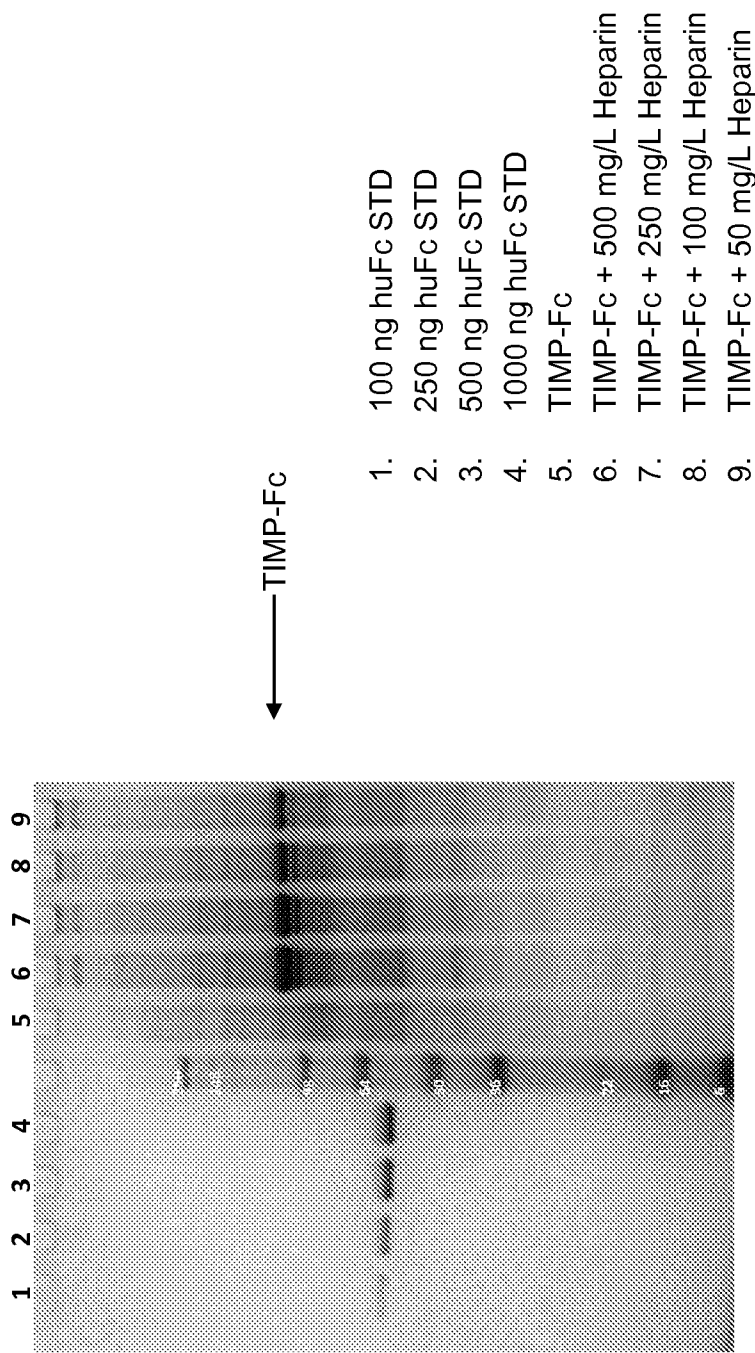


FIGURE 1

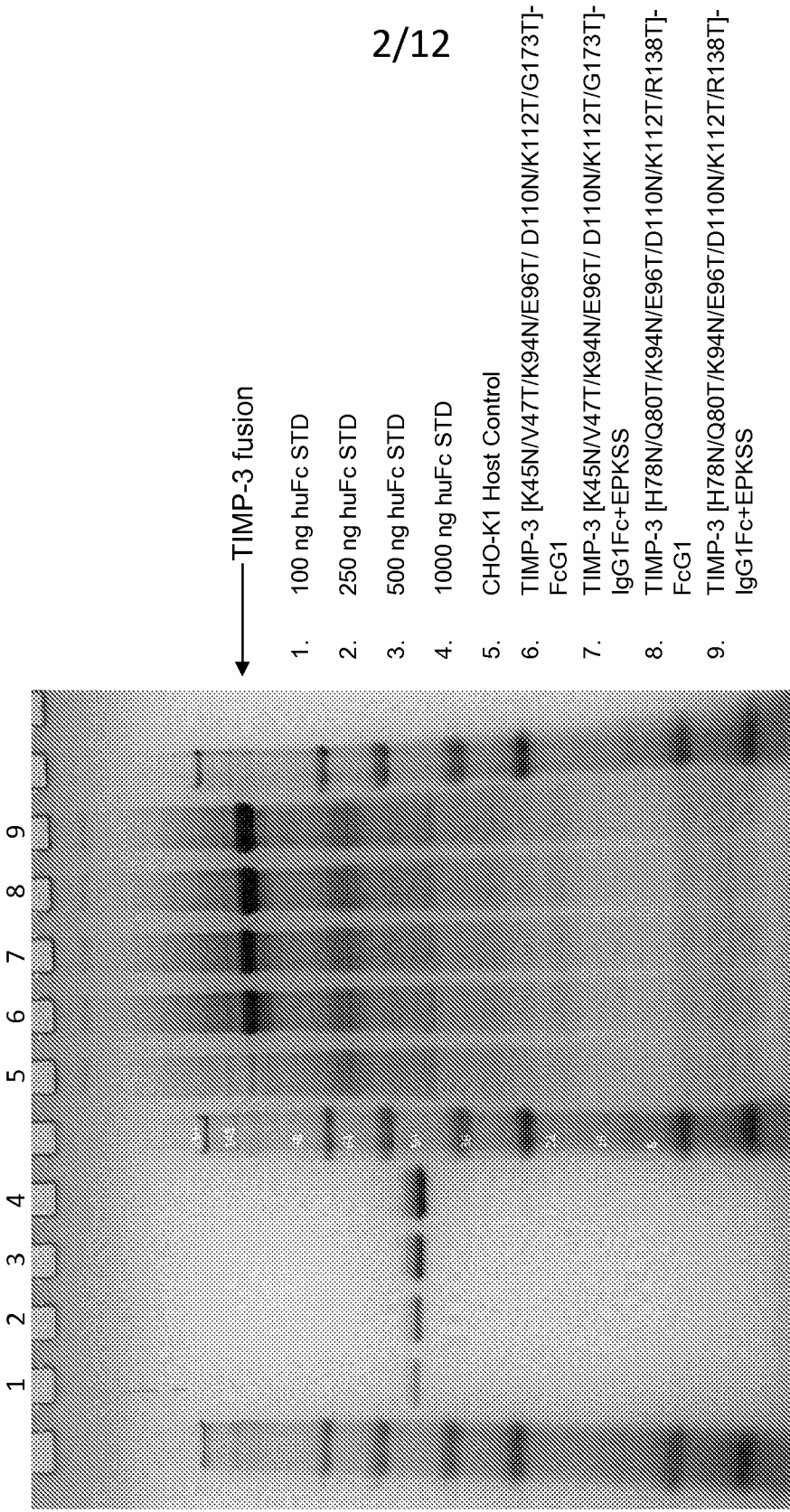


FIGURE 2

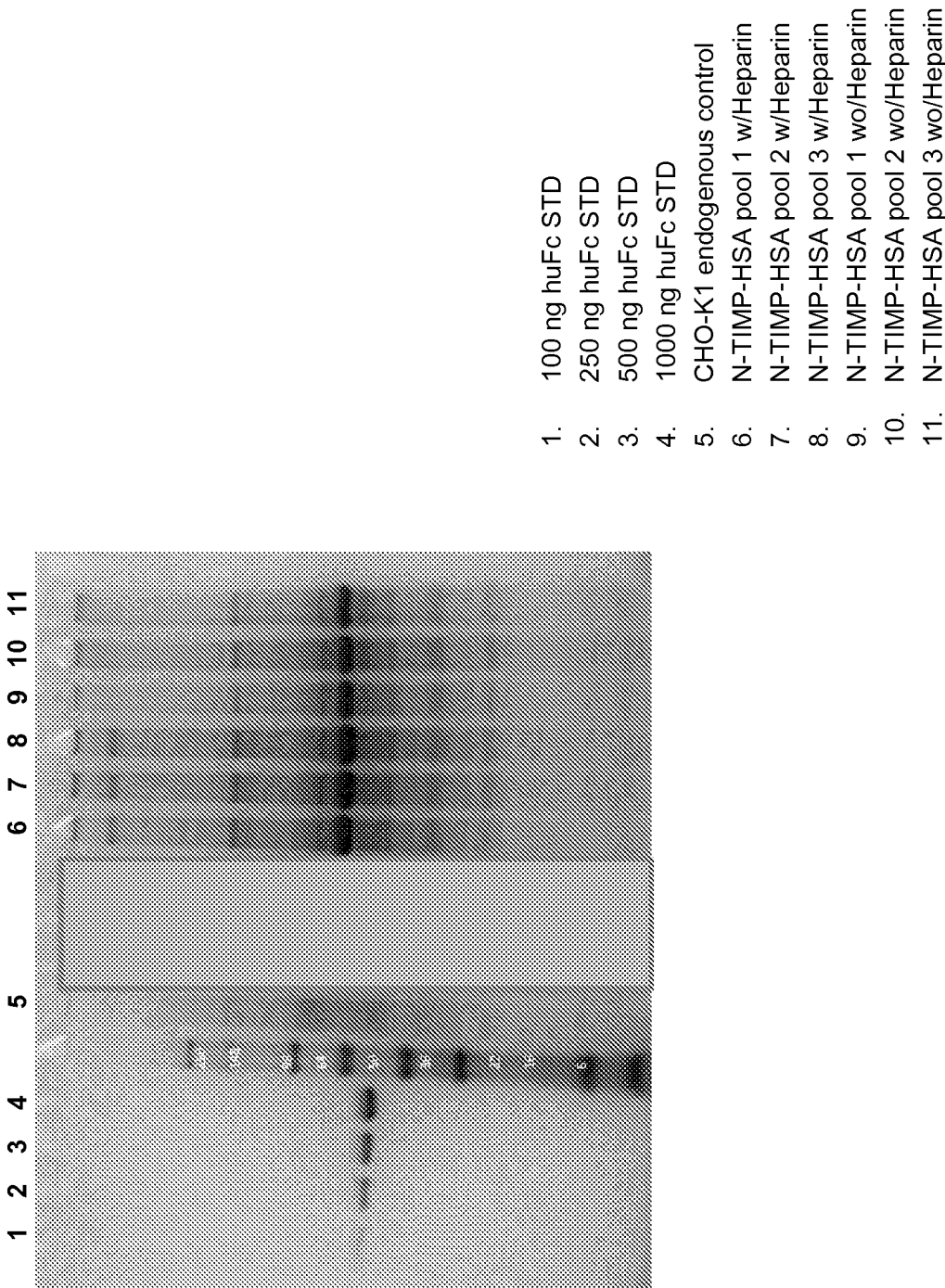
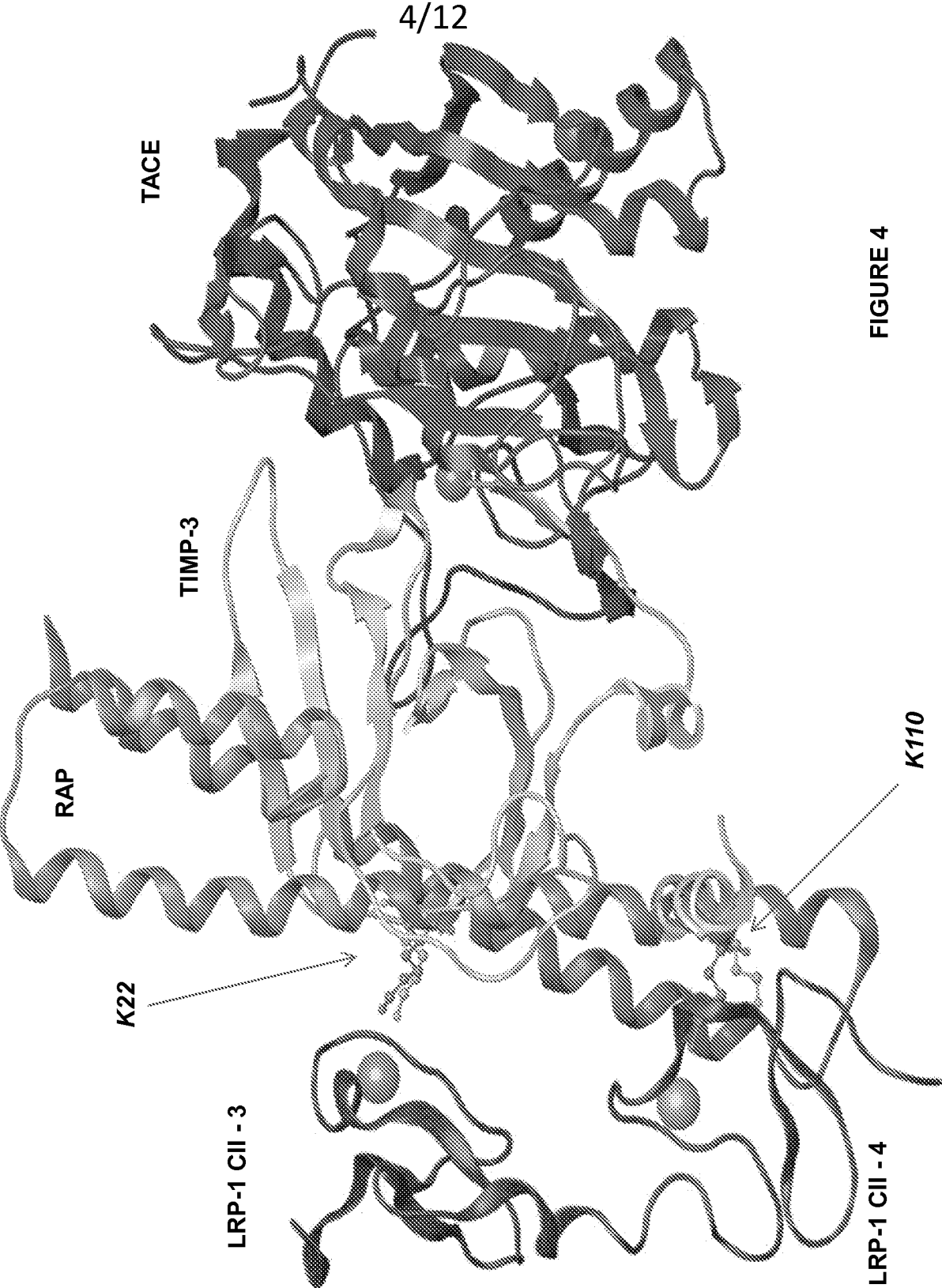


FIGURE 3



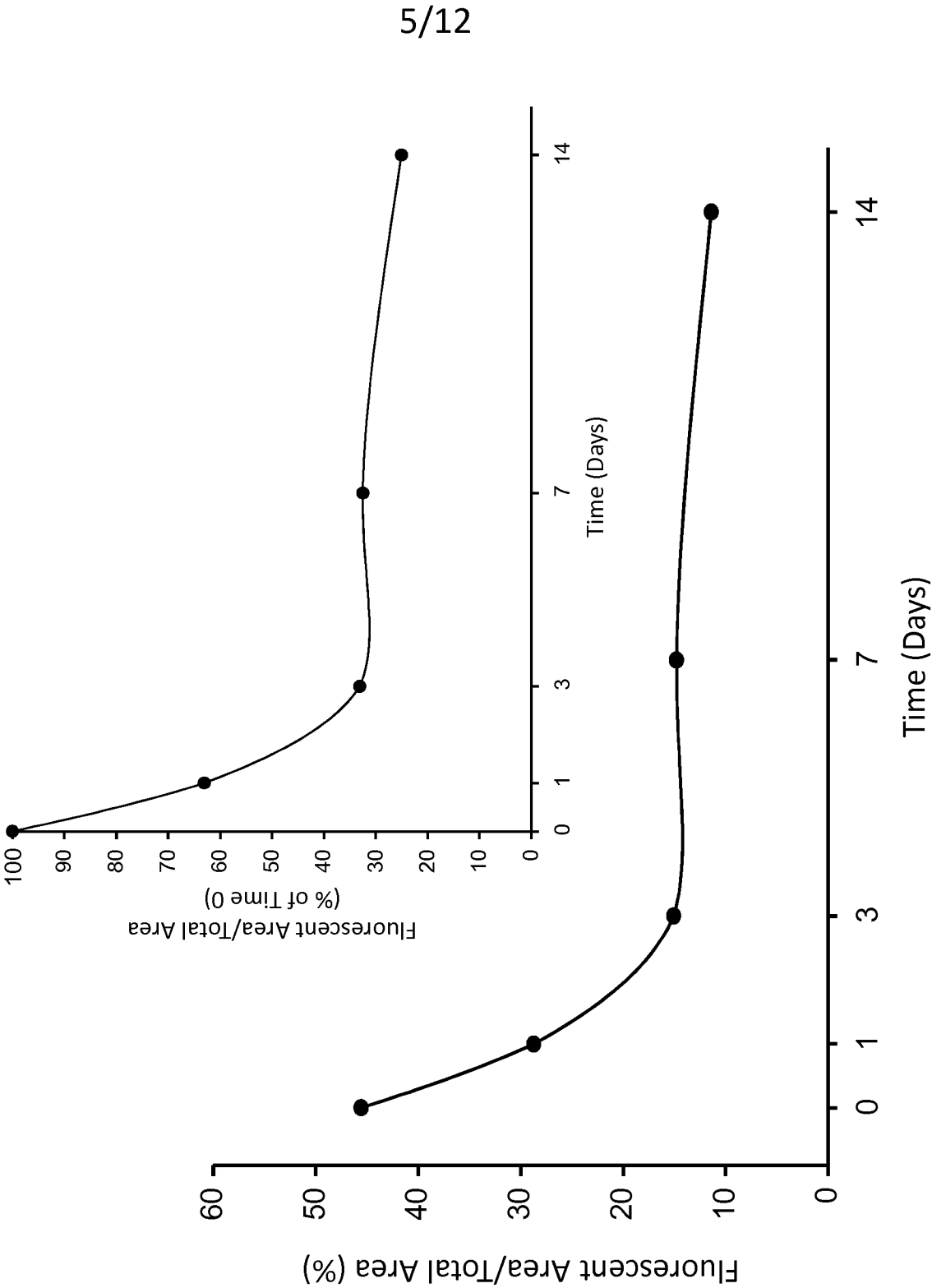


FIGURE 5

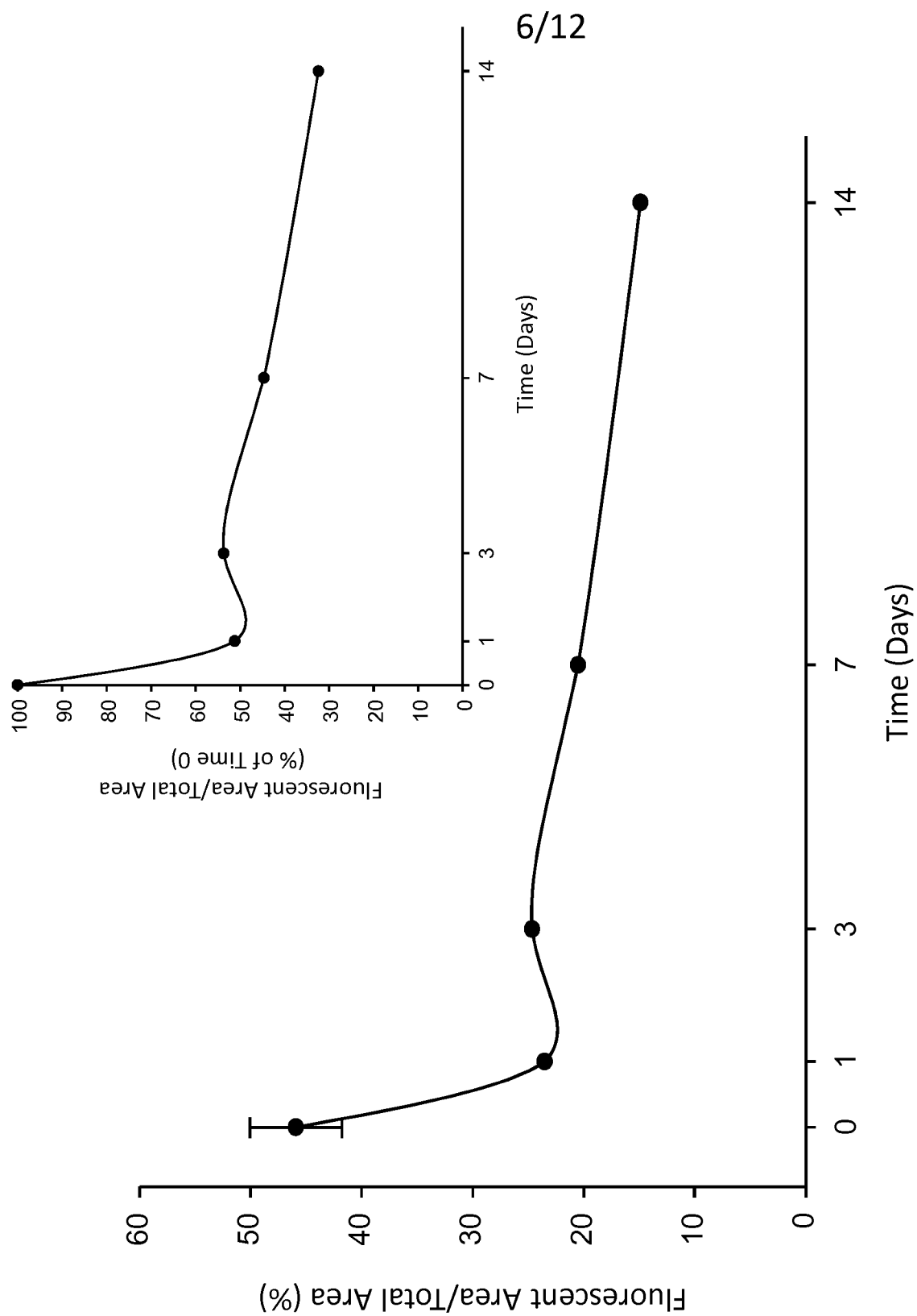


FIGURE 6

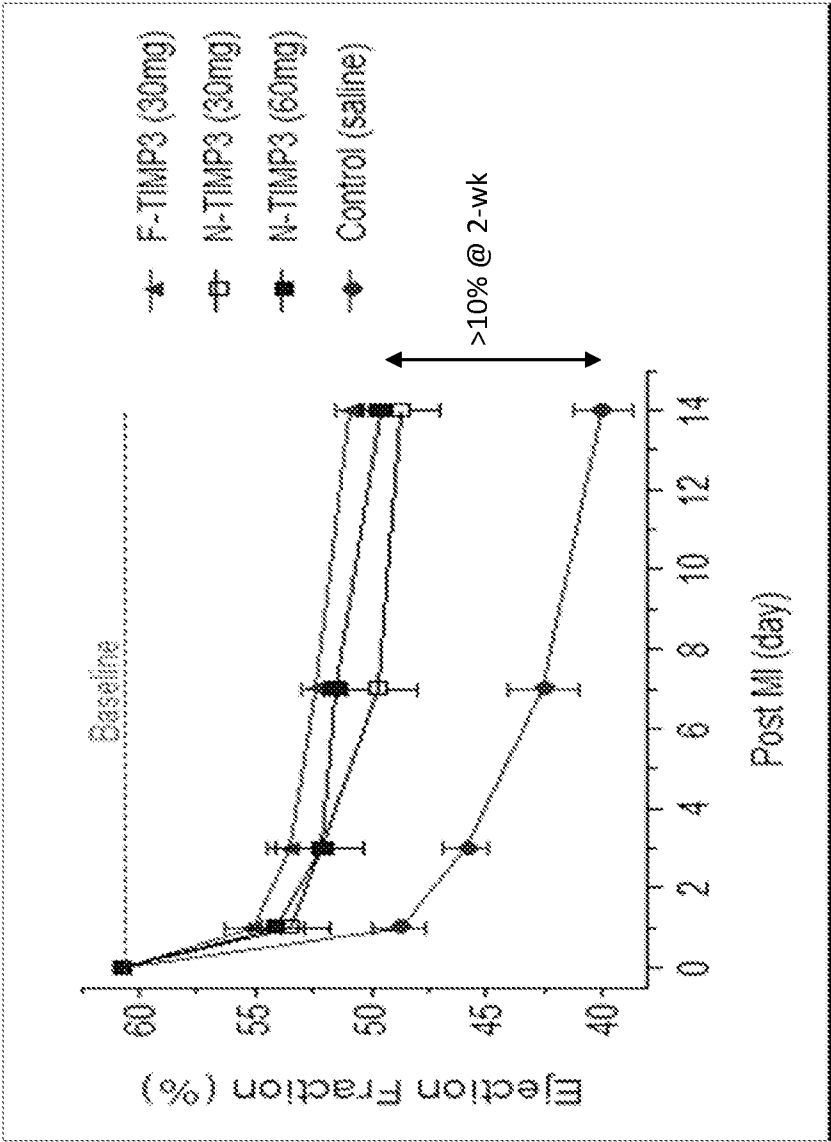
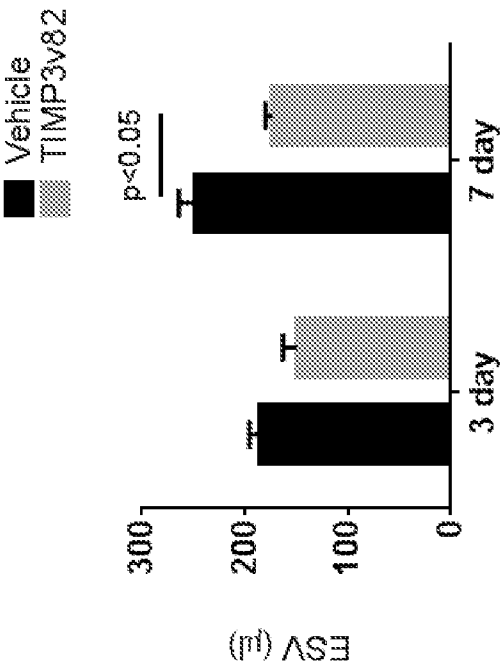
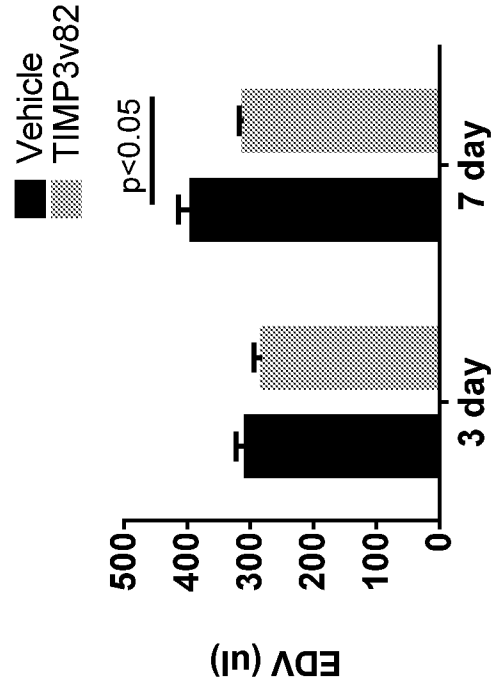
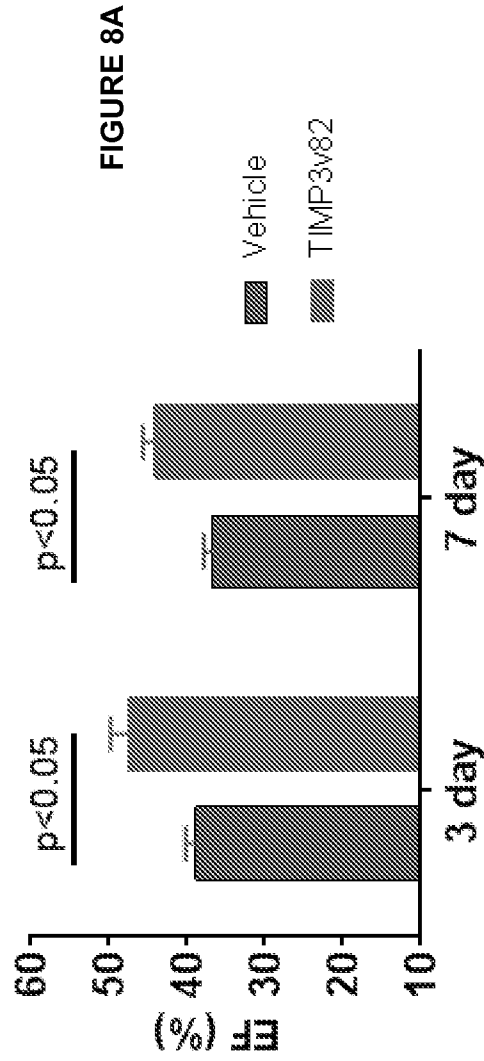


FIGURE 7



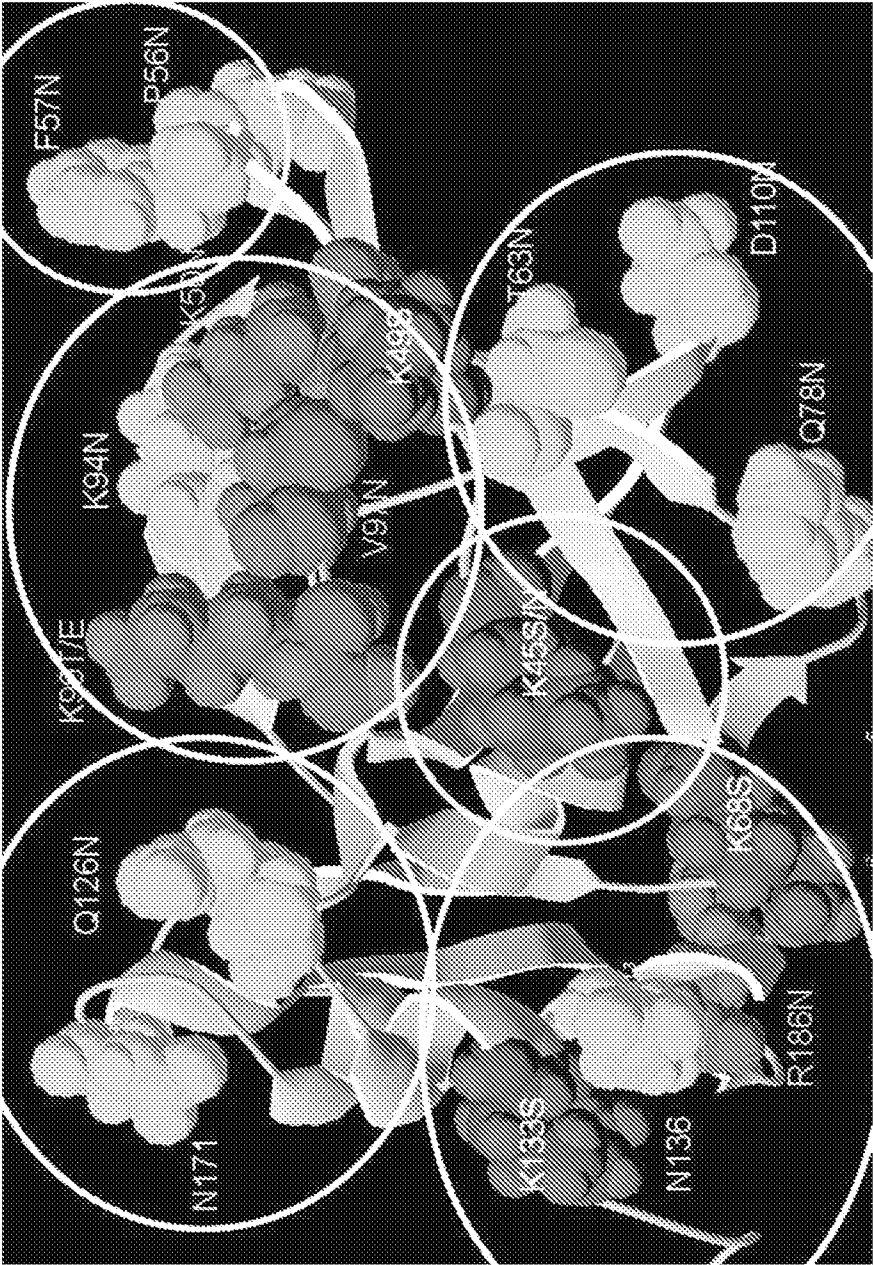


FIGURE 9

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SEQ ID NO:1 native huTIMP3 cDNA

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gccgaggcgt gcacatgctc gccagccac cccaggaagc ccttctgcaa ctccgacatc      120
gtgatccggg ccaaggtggt ggggaagaag ctggtaaagg aggggccctt cggcacgctg      180
gtctacacca tcaagcagat gaagatgtac cgaggcttca ccaagatgcc ccatgtgcag      240
tacatccaca cggaagcttc cgagagtctc tgtggcctta agctggaggt caacaagtac      300
cagtacctgc tgacaggctc cgtctatgat ggcaagatgt acacggggct gtgcaacttc      360
gtggagaggt gggaccagct caccctctcc cagcgcaagg ggctgaacta tcggtatcac      420
ctgggttgta actgcaagat caagtcctgc tactacctgc cttgctttgt gacttccaag      480
aacgagtgtc tctggaccga catgctctcc aatttcgggt accctggcta ccagtccaaa      540
cactacgcct gcatccggca gaaggcggc tactgcagct ggtaccgagg atgggcccc      600
ccggataaaa gcatcatcaa tgccacagac ccc                                     633

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SEQ ID NO:2 native huTIMP3 amino acid

MTPWLGLIVLLGSWSLGDWGAEACTCSPSHPDFAFCNSDIVIRAKVVGKKLVKEGPFGLVYTIKQMKMYRGFT
KMPHVQYIHTASESLCGLKLEVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNRYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:3 huTIMP3(K45N, V47T, P56N, G58T, Q126N, R138T)

XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPDFAFCNSDIVIRANVTGKKLVKEGNFTTLVYTIKQMKMYRGFT
KMPHVQYIHTASESLCGLKLEVNKYQYLLTGRVYDGKMYTGLCNFVERWDNLTLTSLQRKGLNRYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:4 huTIMP3(K45N, V47T, P56N, G58T, K94N, E96T, R138T)

XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPDFAFCNSDIVIRANVTGKKLVKEGNFTTLVYTIKQMKMYRGFT
KMPHVQYIHTASESLCGLNLTVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNRYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:5 huTIMP3(K45N, V47T, P56N, G58T, R138T, G173T)

XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPDFAFCNSDIVIRANVTGKKLVKEGNFTTLVYTIKQMKMYRGFT
KMPHVQYIHTASESLCGLKLEVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNRYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:6 huTIMP3(K45N, V47T, F57N, K94N, E96T, D110N, K112T)

XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPDFAFCNSDIVIRANVTGKKLVKEGPNGLTVYTIKQMKMYRGFT
KMPHVQYIHTASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTSLQRKGLNRYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:7 huTIMP3(K45N, V47T, F57N, K94N, E96T, R138T)

XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPDFAFCNSDIVIRANVTGKKLVKEGPNGLTVYTIKQMKMYRGFT
KMPHVQYIHTASESLCGLNLTVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNRYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:8 huTIMP3(K45N, V47T, H78N, Q80T, K94N, E96T, R138T, G173T)

XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPDFAFCNSDIVIRANVTGKKLVKEGPFGLVYTIKQMKMYRGFT
KMPNVTYIHTASESLCGLNLTVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNRYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

FIGURE 10A

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SEQ ID NO:9 huTIMP3(K45N, V47T, K94N, E96T, D110N, K112T, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRANVTGKKLVKEGPFGLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:10 huTIMP3(K45N, V47T, K94N, E96T, D110N, K112T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRANVTGKKLVKEGPFGLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:11 huTIMP3(K45N, V47T, K94N, E96T, R138T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRANVTGKKLVKEGPFGLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYDGMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:12 huTIMP3(K45S, F57N, K94N, E96T, D110N, K112T, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRASVVGKKLVKEGPNGTLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:13 huTIMP3(K45S, F57N, H78N, Q80T, K94N, E96T, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRASVVGKKLVKEGPNGTLVYTIKQMKMYRGFT
KMPNVTYIHTEASESLCGLNLTVNKYQYLLTGRVYDGMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:14 huTIMP3(K50N, V52T, P56N, G58T, K94N, E96T, D110N, K112T, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKNLTKEGNFTTLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:15 huTIMP3(K50N, V52T, H78N, Q80T, K94N, E96T, R138T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKNLTKEGPFGLVYTIKQMKMYRGFT
KMPNVTYIHTEASESLCGLNLTVNKYQYLLTGRVYDGMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:16 huTIMP3(K50N, V52T, K94N, E96T, D110N, K112T, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKNLTKEGPFGLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:17 huTIMP3(K50N, V52T, K94N, E96T, D110N, K112T, R138T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKNLTKEGPFGLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTLSQRKGLNRYHLCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

FIGURE 10B

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SEQ ID NO:18 huTIMP3(K50N, V52T, K94N, E96T, R138T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKNLTKEGPFGLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNITYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:19 huTIMP3(K50N, V52T, Q126N, R138T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKNLTKEGPFGLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLKLEVNKYQYLLTGRVYDGKMYTGLCNFVERWDNLTLQRKGLNITYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:20 huTIMP3(P56N, G58T, H78N, Q80T, K94N, E96T, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKKLVKEGNFTTLVYTIKQMKMYRGFT
KMPNVTYIHTEASESLCGLNLTVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNITYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:21 huTIMP3(P56N, G58T, K94N, E96T, Q126N, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKKLVKEGNFTTLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYDGKMYTGLCNFVERWDNLTLQRKGLNITYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:22 huTIMP3(P56N, G58T, K94N, E96T, D110N, K112T, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKKLVKEGNFTTLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTSLQRKGLNITYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:23 huTIMP3(P56N, G58T, H78N, Q80T, K94N, E96T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKKLVKEGNFTTLVYTIKQMKMYRGFT
KMPNVTYIHTEASESLCGLNLTVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNRYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:24 huTIMP3(P56N, G58T, Q126N, R138T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKKLVKEGNFTTLVYTIKQMKMYRGFT
KMPHVQYIHTEASESLCGLKLEVNKYQYLLTGRVYDGKMYTGLCNFVERWDNLTLQRKGLNITYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:25 huTIMP3(H78N, Q80T, K94N, E96T, R138T, G173T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKKLVKEGPFGLVYTIKQMKMYRGFT
KMPNVTYIHTEASESLCGLNLTVNKYQYLLTGRVYDGKMYTGLCNFVERWDQLTSLQRKGLNITYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFTYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

SEQ ID NO:26 huTIMP3(H78N, Q80T, K94N, E96T, D110N, K112T, R138T)
XXXXXXXXXXXXXXXXXXXXXXXXCTCSPSHPQDAFCNSDIVIRAKVVGKKLVKEGPFGLVYTIKQMKMYRGFT
KMPNVTYIHTEASESLCGLNLTVNKYQYLLTGRVYNGTMYTGLCNFVERWDQLTSLQRKGLNITYHLGCNCKIK
SCYYLPCFVTSKNECLWTDMLSNFGYPGYQSKHYACIRQKGGYCSWYRGWAPPDKSIINATDP

FIGURE 10C