Figure S1. TFPIΔK2 and K3C have reduced FXa inhibitory activity. FXa (0.2nM) was incubated with 0 (black), 0.05 (red), 0.1 (orange), 0.5 (yellow), 1 (green), 2 (blue), 5 (purple), or 10 nM (gray) TFPlα (A), TFPIΔK2 (B), TFPI-AAKA (C), or K3C (D). FXa activity was measured by monitoring the cleavage of Spectrozyme Xa (0.5 mM) at 405 nm. Shown are the average curves from 3 experiments.
Figure S2. TFPIΔK2 and K3C have reduced TF-FVIIa inhibitory activity. TF (6pM) was incubated with phospholipid vesicles (20μM), FVIIa (20pM), and 0 (black), 0.05 (red), 0.1 (orange), 0.5 (yellow), 1 (green), 2 (blue), 5 (purple), or 10 nM (gray) TFPlα (A), TFPIΔK2 (B), TFPI-AAKA (C), or K3C (D). Reactions were initiated by the addition of FX (20nM), and cleavage of Spectrozyme Xa (0.5mM) was monitored at 405nm. Shown are the average curves from 3 experiments.
Figure S3. The TFPIα C-terminal basic region is conserved in mammals. Residues 249-264 of TFPIα (human sequence numbering) are shown. The conserved basic residues of the basic region are shown in blue and the conserved uncharged residues are shown in orange. Sequences were obtained from the NCBI (www.ncbi.nlm.nih.gov), OMA (www.omabrowser.org), and UniProt (www.uniprot.org) databases.
**Figure S4.** The FV B-domain basic region is conserved in mammals. Residues 995-1010 of FV (human sequence numbering) are shown. The conserved basic residues of the basic region are shown in blue and the conserved uncharged residues are shown in orange. Sequences were obtained from the NCBI (www.ncbi.nlm.nih.gov), OMA (www.omabrowser.org), and UniProt (www.uniprot.org) databases.
Figure S5. The TFPIα C-terminal basic region is conserved in birds and reptiles. Residues 249–264 of TFPIα (human sequence numbering) are shown. The conserved basic residues of the basic region are shown in blue and the conserved uncharged residues are shown in orange.

Sequences were obtained from the NCBI (www.ncbi.nlm.nih.gov), OMA (www.omabrowser.org), and UniProt (www.uniprot.org) databases.
**Figure S6.** The FV B-domain basic region is conserved in birds and reptiles. Residues 995-1010 of FV (human sequence numbering) are shown. The conserved basic residues of the basic region are shown in blue and the conserved uncharged residues are shown in orange. Sequences were obtained from the NCBI (www.ncbi.nlm.nih.gov), OMA (www.omabrowser.org), and UniProt (www.uniprot.org) databases.