Abstract

Title: FACTOR VIII COMPLEX WITH XTEN AND VON WILLEBRAND FACTOR PROTEIN, AND USES THEREOF

The present invention includes a chimeric protein comprising a VWF protein with D' domain and D3 domain of VWF, one or more XTEN sequence, and a FVIII protein, wherein the VWF fragment, the XTEN sequence, or the FVIII protein are linked to or associated with each other. The chimeric protein can further comprise one or more Ig constant region or a portion thereof (e.g., an Fc region). A polypeptide chain of a VWF fragment is associated with a FVIII polypeptide chain linked to an XTEN sequence. The VWF fragment polypeptide chain can prevent or inhibit binding of endogenous VWF to FVIII protein linked to the XTEN sequence. By preventing or inhibiting binding of endogenous VWF to FVIII protein, VWF fragment can extend half-life of chimeric protein comprising FVIII protein. The invention includes nucleotides, vectors, host cells, use of VWF fragment, or chimeric proteins.

Figure 1D