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Desmopressin

National Cancer Institute

Source

National Cancer Institute. *Desmopressin*. NCI Thesaurus. Code C61701.

A synthetic octapeptide, and an analogue of human hormone arginine vasopressin with antidiuretic and coagulant activities. Desmopressin binds to V2 receptors in renal collecting ducts which leads to exocytosis of von Willebrand factor (VWF) and tissue plasminogen activator (t-PA) from Weibel-Palade bodies, thereby increasing water resorption. This agent also increases nitric oxide (NO) production via activation of endothelial NO synthase, thereby induces afferent arteriolar vasodilation. Furthermore, desmopressin stimulates the release of factor VIII from endothelial cells mediated through V1a receptor, thereby promotes blood coagulation.