Defibrotide sodium

Cat. No.: HY-108746

CAS No.: 83712-60-1

Target: Others

Pathway: Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.

Defibrotide (sodium)

BIOLOGICAL ACTIVITY

Description	Defibrotide sodium is a complex mixture of single stranded polydeoxyribonucleotides. Defibrotide sodium has liver protection, anti-inflammatory, antithrombotic, profibrinolytic, and anti-ischemic properties. Defibrotide sodium can be used for sinusoidal obstruction syndrome (SOS)/veno-occlusive disease (VOD) research[1].
In Vitro	Defibrotide sodium's anti-inflammatory effects occur via agonism at adenosine A1 and A2 receptors, which reduces expression of intracellular adhesion molecule-1 and inhibits release of inflammatory mediators[1]. Defibrotide sodium inhibits platelet aggregation by enhancing production of prostaglandins I2 and E2 and stimulates fibrinolysis via increasing tPA activity and inhibiting plasminogen activator inhibitor type 1 activity[1]. Defibrotide sodium also decreases production of tissue factor and increases production of tissue factor pathway inhibitor, resulting in decreased activation of the extrinsic coagulation cascade and fibrin deposition[1]. Defibrotide sodium protects against endothelial cell damage mediated by tumor necrosis factor α and fludarabine-induced activation and apoptosis[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Intracarotid (i.c.) administration of Defibrotide sodium (64 mg/kg bolus plus 64 mg/kg/h for 1 h) prior to i.c. thrombin (100 μg/kg) significantly reduces the ability of thrombin to induce cranial thromboembolism in rabbits[2]. Intravenous (i.v.) administration of thrombin (20 μg/kg) in rabbits induces a reversible accumulation of radiolabelled platelets into the thoracic circulation which is significantly reduced by i.v. administration of defibrotide (64 mg/kg bolus plus 64 mg/kg/h for 1 h) prior to i.v. thrombin[2]. Intravenous injection of human thrombin (1250 μg/kg) to mice induces death within the majority of animals which is significantly reduced by pretreatment with defibrotide (150-175 mg/kg, i.v.)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. May T Aziz, et al. Defibrotide: An Oligonucleotide for Sinusoidal Obstruction Syndrome. Ann Pharmacother. 2018 Feb;52(2):166-174.

[2]. W Paul, et al. The effect of defibrotide on thromboembolism in the pulmonary vasculature of mice and rabbits and in the cerebral vasculature of rabbits. Br J Pharmacol. 1993 Dec;110(4):1565-71.

Caution: Product has not been fully validated for medical applications. For research use only.

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