Desirudin

Cat. No.: HY-109549

CAS No.: 120993-53-5

Target: Thrombin

Pathway: Metabolic Enzyme/Protease

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

BIOLOGICAL ACTIVITY

Description	Desirudin (CGP 39393) is a thrombin inhibitor. Desirudin can inhibit the formation of blood clots and venous stasis thrombosis, which is used for the research of thrombocytopenia or platelet dysfunction[1][2].
IC_{50} & Target	ED50: 0.01 mg/kg (i.v.) and 0.45 mg/kg (s.c.)[2].

In Vivo

Desirudin (CGP 39393, 0.75-3.0 mg/kg, a bolus plus infusion administration, dogs model of cardiopulmonary bypass) is effective in Inhibiting clot formation[1].

Desirudin (0.01-1 mg/kg, Intravenous injections and subcutaneous injection, rat shunt model) inhibits thrombus development with ED_{50} values of 0.3 mg/kg (i.v.) and 1.0 mg/kg (s.c.), and inhibits venous stasis thrombosis with ED_{50} values of 0.01 mg/kg (i.v.) and 0.45 mg/kg (s.c.)[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male mongrel dogs model of cardiopulmonary bypass[1]
Dosage:	1.0 mg/kg + 0.75 mg/kg/h, 1.0 mg/kg + 1.50 mg/kg/h, 1.0 mg/kg + 2.25 mg/kg/h, 1.0 mg/kg + 3.0 mg/kg/h.
Administration:	Administered as a bolus plus infusion
Result:	Inhibited clot formation with no adverse hemodynamic or hematologic effects.

Animal Model:	Rat shunt model of thrombus formation on a cotton-thread[2]
Dosage:	0.01-1 mg/kg approximately
Administration:	Intravenous injections, subcutaneous injection
Result:	Inhibited thrombus development with ED_{50} values of 0.3 mg/kg (i.v.) and 1.0 mg/kg (s.c.). Inhibited venous stasis thrombosis with ED_{50} values of 0.01 mg/kg (i.v.) and 0.45 mg/kg (s.c.).

REFERENCES

[1]. J M Walenga, et al. Evaluation of CGP 39393 as the Anticoagulant in Cardiopulmonary Bypass Operation in a Dog Model. Ann Thorac Surg. 1994 Dec;58(6):1685-9.

[2]. M D Talbot, et al. Recombinant desulphatohirudin (CGP 39393) anticoagulant and antithrombotic properties in vivo. Thromb Haemost. 1989 Feb 28;61(1):77-80.

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