

Product Data Sheet

Product Name: Zemocimig

Cat. No.: GC84450

Chemical Properties

Cas. No. 2955620-21-8

Formula M.Wt 144.33

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Zemocimig

Background

Zemocimig (NXT007) is an activated factor VIII mimetic antibody. Zemocimig binds to FX, FIXa and their activated forms to form a ternary complex, bridges FIXa and FX on the phospholipid surface, and restores intrinsic prothrombinase activity. Zemocimig induces thrombin generation, acts as a procoagulant, antifibrinolytic agent and hemostatic agent, and can shorten aPTT, increase fibrin deposition, correct clotting time, and reduce bleeding parameters. Zemocimig is applicable to the research of hemophilia A [1] [2] [3] [4] [5].

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

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In Vivo, Zemocimig (0.0075-0.6 mg/kg; intravenous injection; single dose) exhibits dose-dependent hemostatic activity in a cynomolgus monkey model of acquired hemophilia A^[1]. Zemocimig (1-5 mg/kg) exhibits potent hemorrhage control efficacy in hemophilia A mice supplemented with human FIX/FX, with significant reductions in bleeding parameters observed at doses of 1 mg/kg and 5 mg/kg^[3]. Zemocimig (2-20 mg/kg) shows no prothrombotic effects at doses of 2 mg/kg and 20 mg/kg in hemophilia A mice receiving human FIX/FX supplementation and subjected to ferric chloride-induced carotid artery injury^[3]. Zemocimig (0.25-20 mg/kg; intravenous injection; single administration; administered 24 hours prior to tail amputation) controls acute bleeding in a mouse model of hemophilia A, and achieves a statistically significant reduction in bleeding time even at a dose as low as 1 mg/kg^[4]. Zemocimig (2-20 mg/kg; single administration; 24 hours prior to injury) shows no prothrombotic properties in a ferric chloride-induced mouse arterial thrombosis model, even at high doses^[4].

In Vitro, Zemocimig binds with high affinity to human and cynomolgus monkey FIX/FIXa and FX/FXa^[1]. Zemocimig (31-150 nM) demonstrates activity equivalent to 40 IU/dL rhFVIII at 31 nM and 100 IU/dL rhFVIII at 150 nM^[1]. Zemocimig strongly shortens APTT in FVIII-deficient hemophilia A plasma^[1]. Zemocimig dose-dependently enhances thrombin generation activity in FXIa-triggered assays using FVIII-neutralized cynomolgus monkey plasma^[1]. Zemocimig (0.1 nM) (as represented by its sequence-identical analogue zemocimig-SIA) exhibits high-affinity assembly of the FIXa/FX ternary complex with an apparent KD of 0.31 nM in a purified FX activation biochemical assay^[2]. Zemocimig potently increases tissue factor-triggered peak height thrombin generation in platelet-rich and platelet-poor hemophilia A-like (FVIII-neutralized) plasma^[3]. Zemocimig dose-dependently delays tissue plasminogen activator-mediated fibrinolysis in congenital hemophilia A plasma, and this effect correlates with thrombin generation^[3]. Zemocimig (0.1, 1, 10, 100, 1000 µg/mL) potently increases tissue factor-triggered peak height thrombin generation in FVIII-neutralized human platelet-rich and platelet-poor plasma, reaching a maximum effect equivalent to 100 IU/dL porcine FVIII at 30-100 µg/mL, and is more potent than the comparator^[4]. Zemocimig (0.1, 0.3, 1, 3, 10, 30, 100, 300 µg/mL) delays tPA-mediated fibrinolysis in severe human hemophilia A plasma with an EC₅₀ of 1.7 µg/mL^[4]. Zemocimig (0.005, 0.01, 0.05, 0.25, 1.25, 6.25, 37.5, 150 µg/mL (plasma equivalent); 30 min (anti-FVIII pre-incubation); 2 h (ROTEM measurement)) corrects clotting time and clotting kinetics in FVIII-neutralized human whole blood, with EC₅₀ values of 24 ng/mL and 0.11 µg/mL,

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respectively^[4].

References:

- [1]. Teranishi-Ikawa Y, et al. A bispecific antibody NXT007 exerts a hemostatic activity in hemophilia A monkeys enough to keep a nonhemophilic state. Journal of thrombosis and haemostasis: JTH. 2024 Feb;22(2):430-440.
- [2]. Jacob Lund, et al. Mechanism of action and impact on thrombin generation of denecimig (Mim8), emicizumab, and zemocimig (NXT007): comparative analysis using sequence-identical analogues. Research and Practice in Thrombosis and Haemostasis. 10 July 2026, 106816.
- [3]. Matthew Locke, et al. Preclinical Evaluation of NXT007 Using in Vitro and In Vivo Models of Hemostasis and Thrombosis. Blood. Volume 144, Supplement 1, 5 November 2024, Page 1199.
- [4]. Locke M, et al. Next-generation FVIIIa-mimetic bispecific antibody NXT007: evaluation in preclinical models of hemostasis and thrombosis. Blood advances. 2026 Feb 24;10(4):1058-1067.
- [5]. Keiji Nogami, et al. Ex vivo evaluation of the procoagulant effect of NXT007 prophylaxis in people with Hemophilia A without factor VIII inhibitors: Phase I/II study (NXTAGE). Blood. Volume 146, Supplement 1, 3 November 2025, Page 3061.

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