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产品名称：达比加群酯甲磺酸
产品别名：Dabigatran etexilate mesylate；BIBR 1048MS; Dabigatran etexilate methanesulfonate

生物活性：

Description

Dabigatran etexilate mesylate (BIBR 1048MS) is the orally active prodrug of dabigatran. Dabigatran is a reversible and selective, direct thrombin inhibitor (DTI) with Ki value of 4.5 nM. IC50 Value: 4.5 nM (Ki); 10 nM(Thrombin-induced platelet aggregation) [1] in vitro: Dabigatran selectively and reversibly inhibited human thrombin(Ki: 4.5 nM) as well as thrombin-induced platelet aggregation (IC(50): 10 nM), while showing no inhibitory effect on other platelet-stimulating agents.Thrombin generation in platelet-poor plasma (PPP), measured as the endogenous thrombin potential (ETP) was inhibited concentration-dependently (IC(50): 0.56 microM). Dabigatran demonstrated concentration-dependent anticoagulant effects in various species in vitro, doubling the activated partial thromboplastin time (aPTT), prothrombin time (PT) and ecarin clotting time (ECT) in human PPP at concentrations of 0.23, 0.83 and 0.18 microM, respectively [1]. in vivo: Dabigatran prolonged the aPTT dose-dependently after intravenous administration in rats (0.3, 1 and 3 mg/kg) and rhesus monkeys (0.15, 0.3 and 0.6 mg/kg). Dose- and time-dependent anticoagulant effects were observed with dabigatran etexilate administered orally to conscious rats (10, 20 and 50 mg/kg) or rhesus monkeys (1, 2.5 or 5 mg/kg), with maximum effects observed between 30 and 120 min after administration, respectively [1]. Patients treated with dabigatran etexilate experienced fewer ischaemic strokes (3.74 dabigatran etexilate vs 3.97 warfarin) and fewer combined intracranial haemorrhages and haemorrhagic strokes (0.43 dabigatran etexilate vs 0.99 warfarin) per 100 patient-years [2]. Clinical trial: An Evaluation of the Pharmacokinetics and Pharmacodynamics of Oral Dabigatran Etexilate in Hemodialysis Patients . Phase1

Solvent&Solubility

In Vitro:

DMSO : 50 mg/mL (69.08 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3815 mL	6.9076 mL	13.8152 mL
	5 mM	0.2763 mL	1.3815 mL	2.7630 mL
	10 mM	0.1382 mL	0.6908 mL	1.3815 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline

	Solubility: ≥ 2.5 mg/mL (3.45 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (3.45 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。 2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (3.45 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (3.45 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (3.45 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (3.45 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Wienen W, Stassen JM, Priepke H, In-vitro profile and ex-vivo anticoagulant activity of the direct thrombin inhibitor dabigatran and its orally activeprodrug, dabigatran etexilate. Thromb Haemost. 2007 Jul;98(1):155-62. [2]. Kansal AR, Sorensen SV, Gani R, Cost-effectiveness of dabigatran etexilate for the prevention of stroke and systemic embolism in UK patients withatrial fibrillation. Heart. 2012 Apr;98(7):573-8.