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产品名称：匹美诺芬
产品别名：Ibuprofen piconol ；布洛芬吡啶甲醇；U75630

生物活性：

Description	Ibuprofen piconol is a non-steroidal, anti-inflammatory (NSAID) agent for the topical relief of primary thermal burns and sunburns.
In Vitro	Ibuprofen piconol is a chemically stable, slightly hygroscopic liquid that strongly partitions into the oil phase and shows no indication of surface activity. This drug has very limited solubility in water (16.5 ppm), modest solubility in glycerol (16.4 mg/mL), and is miscible with less polar organics except for silicone fluids[1]. Varying the initial concentration of ibuprofen piconol does not alter the hydrolysis half-life (concentration range from 50 to 200 μg/mL). The anticoagulant used alters the hydrolysis half-life. For plasma, the half-life is shortest when no anticoagulant is present ($t_{1/2}$=2.5 h) and longer with the presence of anticoagulants; $t_{1/2}$=8.0 h for citrate, $t_{1/2}$=15.5 h for heparin and $t_{1/2}$=161.8 h for EDTA. Red blood cell uptake of ibuprofen piconol is minimal and ranges from 0.4 to 4.1% over the ibuprofen piconol concentrations used in the study[2].
In Vivo	When ibuprofen piconol is applied topically, only ibuprofen and its metabolites are observed in plasma and urine. The conversion of ibuprofen piconol to ibuprofen appears to be extremely rapid in vivo[2].
Solvent&Solubility	***In Vitro:*** **DMSO : ≥ 50 mg/mL (168.13 mM)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3626 mL	16.8129 mL	33.6259 mL
	5 mM	0.6725 mL	3.3626 mL	6.7252 mL
	10 mM	0.3363 mL	1.6813 mL	3.3626 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 (8.41 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (8.41 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 (8.41 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.41 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 (8.41 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.41 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]. Pesheck CV, et al. Preformulation characterization of topical Ibuprofen Piconol. Drug Development and Industrial Pharmacy Vol. 19 , Iss. 15,1993 [2]. Christensen JM, et al. Ibuprofen piconol hydrolysis in vitro in plasma, whole blood, and serum using different anticoagulants. J Pharm Sci. 1991 Jan;80(1):29-31.