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产品名称：PH-797804
产品别名：PH-797804

生物活性：

Description	PH-797804 is a ATP-competitive, selective p38α/p38β inhibitor (IC50=26 nM and Ki=5.8 nM for p38α; Ki=40 nM for p38β) and does not inhibit JNK2.
IC_{50} & Target	IC50: 26 nM (p38α)[1] Ki: 5.8 nM (p38α), 40 nM (p38β)[2]
In Vitro	PH-797804 blocks LPS-induced TNF-α production and p38 kinase activity in the human monocytic U937 cell line, with comparable IC50 of 5.9 nM and 1.1 nM. PH-797804 has no inhibitory effect on either the JNK pathway (c-Jun phosphorylation) or ERK pathway (ERK phosphorylation) in U937 cells at concentrations up to 1 μM. PH-797804 inhibits RANKL- and M-CSF-induced osteoclast formation in a concentration-dependent manner, with IC50 of 3 nM in primary rat bone marrow cells[1]. IC50 values for PH-797804 against the following targets have been determined to be greater than 200 μM (unless specified): CDK2, ERK2, IKK1, IKK2, IKKi, MAPKAP2, MAPKAP3, MKK7 (>100 μM), MNK, MSK (>164 μM), PRAK, RSK2, and TBK1, which means the activity of PH-797804 is specific[2].
In Vivo	Orally dosing of PH-797804 effectively inhibits acute inflammatory responses induced by systemically administered endotoxin in both rat and cynomolgus monkeys. PH-797804 treatment for 10 days demonstrates robust anti-inflammatory activity in chronic disease models, significantly reducing both joint inflammation and associated bone loss in streptococcal cell wall-induced arthritis in rats and mouse collagen-induced arthritis. Dose-response analysis resulted in ED50 values of 0.07 mg/kg and 0.095 mg/kg in rat and cynomolgus monkeys, respectively. PH-797804 inhibits LPS-induced TNF-α, IL-6, and MK-2 activity in a dose- and concentration-dependent manner in a human endotoxin challenge model[1].
Solvent&Solubility	***In Vitro:*** **DMSO : 50 mg/mL (104.76 mM;** Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.0951 mL	10.4756 mL	20.9512 mL
5 mM	0.4190 mL	2.0951 mL	4.1902 mL
10 mM	0.2095 mL	1.0476 mL	2.0951 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: ≥ 3 mg/mL (6.29 mM); Clear solution 此方案可获得 ≥ 3 mg/mL (6.29 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 30.0 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% corn oil Solubility: ≥ 2.5 mg/mL (5.24 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (5.24 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]. Hope HR, et al. Anti-inflammatory properties of a novel N-phenyl pyridinone inhibitor of p38 mitogen-activated protein kinase: preclinical-to-clinical translation. J Pharmacol Exp Ther, 2009, 331(3), 882-895. [2]. Xing L, et al. Structural bioinformatics-based prediction of exceptional selectivity of p38 MAP kinase inhibitor PH-797804. Biochemistry, 2009, 48(27), 6402-6411.