产品名称：**HPOB**
产品别名：**HPOB**

生物活性：

Description

HPOB is a highly potent and selective inhibitor of histone deacetylase 6 (HDAC6) with IC50 of 56 nM, >30 fold less potent against other HDACs. target: HDAC6 [1] IC 50: 56nM [1] In vitro: HPOB causes growth inhibition of normal and transformed cells but does not induce cell death. HPOB enhances the effectiveness of DNA-damaging anticancer drugs in transformed cells but not normal cells. [1] Neuroprotective effect of HPOB demonstrated the crucial role of HDAC6 inhibition in reducing Cort-induced apoptosis in PC12 cells. Pre-treatment with HPOB remarkably reduces Cort-induced cytotoxicity and confirms the anti-apoptotic effect of HPOB via the caspase-3 activity assay and H33342/PI and TUNEL double staining. [2] In vivo: on corticosterone (Cort)-induced apoptosis and explors the possible mechanism of action of HPOB in rat adrenal pheochromocytoma (PC12) cells, which possesses typical neuron features and expresses high levels of glucocorticoid receptors. [2]

IC_{50} & Target

HDAC6	HDAC3/NCOR2	HDAC8	HDAC1	HDAC10
0.056 μM (IC_{50})	1.7 μM (IC_{50})	2.8 μM (IC_{50})	2.9 μM (IC_{50})	3.0 μM (IC_{50})

HDAC2
4.4 μM (IC_{50})

Solvent&Solubility

In Vitro:

DMSO : 50 mg/mL (159.06 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1813 mL	15.9063 mL	31.8127 mL
	5 mM	0.6363 mL	3.1813 mL	6.3625 mL
	10 mM	0.3181 mL	1.5906 mL	3.1813 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 (7.95 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (7.95 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 (7.95 mM); Clear solution

	此方案可获得 ≥ 2.5 mg/mL (7.95 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 (7.95 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (7.95 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]. Lee JH et al. Development of a histone deacetylase 6 inhibitor and its biological effects. Proc Natl Acad Sci U S A. 2013 Sep 24;110(39):15704-9. [2]. Li ZY et al. HPOB, an HDAC6 inhibitor, attenuates corticosterone-induced injury in rat adrenal pheochromocytoma PC12 cells by inhibiting mitochondrial GR translocation and the intrinsic apoptosis pathway. Neurochem Int. 2016 Oct;99:239-51.