



上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话: 021-61312973 传真: 021-55068248
网址: www.shyuanye.com
邮箱: shyysw@sina.com

产品名称: (E,E)-Bis(2-hydroxybenzylidene)acetone (2-HBA)
产品别名: 2-HBA

生物活性:

Description	2-HBA is a potent inducer of NAD(P)H:quinone acceptor oxidoreductase 1 (NQO1) which can also activate caspase-3 and caspase-10.				
IC ₅₀ & Target	Caspase-3	Caspase-10			
In Vitro	When L1210 cells are exposed to 0.6 μM 2-HBA (bis(2-hydroxy-benzylidene)acetone), the specific activities of NQO1 and glutathione reductase increase by 6- and 1.5-fold, respectively. The total cellular glutathione content is also coordinately induced by 2.4-fold. In a more detailed study it is found that NQO1 is induced by 2-HBA in a concentration-dependent manner. Treatments with 2-HBA cause cell cycle arrest and apoptosis in both L1210 wild type cells and their Y8 drug-resistant counterparts in a concentration-dependent manner. 2-HBA can also activate caspase-3 and caspase-10[1].				
Solvent&Solubility	In Vitro: DMSO : 100 mg/mL (375.53 mM; Need ultrasonic)				
	Preparing Stock Solutions	SolventMassConcentration	1 mg	5 mg	10 mg
		1 mM	3.7553 mL	18.7765 mL	37.5530 mL
		5 mM	0.7511 mL	3.7553 mL	7.5106 mL
		10 mM	0.3755 mL	1.8777 mL	3.7553 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℃, 6 months; -20℃, 1 month。 -80℃ 储存时，请在 6 个月内使用， -20℃ 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 (9.39 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.39 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 (9.39 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.39 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。				



上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话: 021-61312973 传真: 021-55068248
网址: www.shyuanye.com
邮箱: shyysw@sina.com

References	[1]. Dinkova-Kostova AT, et al. Bis(2-hydroxybenzylidene)acetone, a potent inducer of the phase 2 response, causes apoptosis in mouse leukemia cells through a p53-independent, caspase-mediated pathway. Cancer Lett. 2007 Jan 8;245(1-2):341-9.
实验参考:	
Cell Assay	After exposure to 2-HBA (bis(2-hydroxybenzylidene)acetone) for 24 h, duplicate aliquots of cells (1×10^6) are collected by centrifugation and washed with cold DPBS. Apoptosis is determined using the Annexin-V-FLUOS assay with simultaneous determination of the necrotic fraction by the uptake of propidium iodide[1].
Kinase Assay	Cells (20,000 per well) are grown for 24 h in 96-well plates, then exposed to 2-HBA (bis(2-hydroxybenzylidene)acetone) for either 24 h (for glutathione determination) or 48 h (for determination of enzyme activities). At the end of the exposure period, cells are collected by centrifugation ($1500 \times g$ for 15 min at 4°C), washed with DPBS, and finally lysed in 0.08% digitonin. An aliquot (25 μL) is used for protein analysis. Activity of NQO1 is determined by the Prochaska test[1].
References	[1]. Dinkova-Kostova AT, et al. Bis(2-hydroxybenzylidene)acetone, a potent inducer of the phase 2 response, causes apoptosis in mouse leukemia cells through a p53-independent, caspase-mediated pathway. Cancer Lett. 2007 Jan 8;245(1-2):341-9.

源叶生物