



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: **Methylproamine**
产品别名: **Methylproamine**

生物活性:

Description

Methylproamine is a DNA-binding radioprotector which, on the basis of published pulse radiolysis studies, acts by repair of transient radiation-induced oxidative species on DNA. IC50 Value: N/A Target: DNA-binding radioprotector in vitro: The extent of radioprotection at the clonogenic survival endpoint increased with methylproamine concentration up to a maximum dose modification factor (DMF) of 2.0 at 10 μM. At least 0.1 fmole/nucleus of methylproamine is required to achieve a substantial level of radioprotection (DMF of 1.3) with maximum protection (DMF of 2.0) achieved at 0.23 fmole/nucleus. The γH2AX focus yield per cell nucleus 45 min after irradiation decreased with drug concentration with a DMF of 2.5 at 10 μM [1]. Methylproamine-treated cells had fewer γH2AX foci after IR compared to untreated cells. Also, the presence of methylproamine decreased the amount of lower molecular weight DNA entering the gel as shown by the pulsed field gel electrophoresis assay [2]. Experiments with V79 cells have shown that methylproamine is approximately 100-fold more potent than the classical aminothioli radioprotector WR1065. The crystal structures of methylproamine and proamine complexes with the dodecamer d(CGCGAATTCGCG)(2) confirm that the new analogues also are minor groove binders [3]. in vivo: N/A Clinical trial: N/A

In Vitro:

DMSO : ≥ 41 mg/mL (88.06 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM		2.1478 mL	10.7391 mL	21.4781 mL
	5 mM		0.4296 mL	2.1478 mL	4.2956 mL
	10 mM		0.2148 mL	1.0739 mL	2.1478 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: ≥ 0.62 mg/mL (1.33 mM); Clear solution

此方案可获得 ≥ 0.62 mg/mL (1.33 mM, 饱和度未知) 的澄清溶液。

以 1 mL 工作液为例, 取 100 μL 6.2 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。

Solvent&Solubility



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	2.请依序添加每种溶剂: 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.62 mg/mL (1.33 mM); Clear solution 此方案可获得 ≥ 0.62 mg/mL (1.33 mM, 饱和度未知) 的澄清溶液。 以 1 mL 工作液为例, 取 100 μL 6.2 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。
References	[1]. Lobachevsky PN, Vasireddy RS, Broadhurst S, Protection by methylproamine of irradiated human keratinocytes correlates with reduction of DNA damage. Int J Radiat Biol. 2011 Mar;87(3):274-83. [2]. Sprung CN, Vasireddy RS, Karagiannis TC, Methylproamine protects against ionizing radiation by preventing DNA double-strand breaks. Mutat Res. 2010 Oct 13;692(1-2):49-52. [3]. Martin RF, Broadhurst S, Reum ME, In vitro studies with methylproamine: a potent new radioprotector. Cancer Res. 2004 Feb 1;64(3):1067-70.

源叶生物