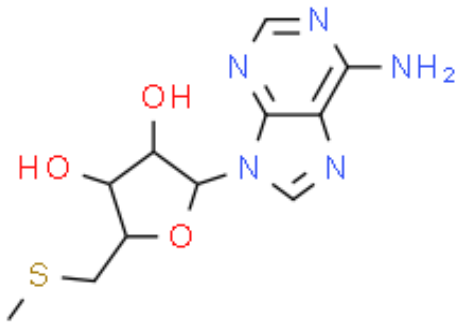
Product Data Sheet

Cas No.:	2457-80-9	Cat. No:	PC10374
Product Name:	Methylthioadenosine		
Product synonym:	5-脱氧-5-甲基硫代腺苷酸;5'-脱氧-5'-甲硫腺苷;5-脱氧-5-甲硫腺苷;5''-脱氧-5''-硫代甲基酰苷;甲硫腺苷;5'-脱氧-5'-硫代甲基酰苷		
Chemical name:	Methylthioadenosine		
MF:	C11H15N5O3S	FW:	297.3335
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax:	-	Formulation:	-
Solubility :			
SMILES :	S(C([H])([H])[H])C([H])([H])[C@]1([H])[C@]([H])([C@]([H])([C@]([H])(N2C([H])=NC3=C(N([H])[H])N=C([H])N=C23)O1)O[H])O[H]		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

5'-Methylthioadenosine 是由 S-腺苷酸产生的，有强效的抑制作用。

生物活性	5-Methylthioadenosine (5-(Methylthio)-5-deoxyadenosine) is a nucleoside generated from S-adenosylmethionine (SAM) during polyamine synthesis. 5-Methylthioadenosine suppresses tumors by inhibiting tumor cell proliferation, invasion, and the induction of **apoptosis** while controlling the inflammatory micro-environments of tumor tissue. 5-Methylthioadenosine and its associated materials have striking regulatory effects on tumorigenesis.
IC50 & Target[1][2]	Human Endogenous Metabolite / Microbial Metabolite

<table>
<tr><td>体外研究(In Vitro)</td><td>
5-Methylthioadenosine protects MTAP cells significantly better than MTAP cells from 6TG (6′-thioguanine) toxicity.

Medlife has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay
<table>
<tr><td>Cell Line:</td><td>MTAP and MTAP NIH3T3 cells, isogenic MTAP and MTAP cell line derived from a human HT1080 fibrosarcoma</td></tr>
<tr><td>Concentration:</td><td>6TG and 2FA in combination with 10 μM MTA</td></tr>
<tr><td>Incubation Time:</td><td>48 hours</td></tr>
<tr><td>Result:</td><td>Significantly increased IC_{50} concentration in MTAP cells, but no significant change in MTAP cells.</td></tr>
</table>
</td></tr>
<tr><td>体内研究(In Vivo)</td><td>
The 2FA (2′-fluoroadenine) + MTA (5-Methylthioadenosine) combination (100 mg/kg MTA; 20 mg/kg 2FA) inhibits tumor growth of four different MTAP human tumor cell lines in mouse xenograft models.

Medlife has not independently confirmed the accuracy of these methods. They are for reference only.
</td></tr>
<tr><td>包装储存</td><td>
-20°C, protect from light

*In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)
</td></tr>
<tr><td>溶解度数据</td><td>
体外研究:

DMSO : 50 mg/mL (168.16 mM; Need ultrasonic)

DMF : 2.5 mg/mL (8.41 mM; Need ultrasonic)

H_2O : 1 mg/mL (3.36 mM; Need ultrasonic)
<table>
<tr><td rowspan="4">配制储备溶液</td><td>质量
溶剂体积
浓度</td><td>1 mg</td><td>5 mg</td><td>10 mg</td></tr>
<tr><td>1 mM</td><td>3.3633 mL</td><td>16.8163 mL</td><td>33.6327 mL</td></tr>
<tr><td>5 mM</td><td>0.6727 mL</td><td>3.3633 mL</td><td>6.7265 mL</td></tr>
<tr><td>10 mM</td><td>0.3363 mL</td><td>1.6816 mL</td><td>3.3633 mL</td></tr>
</table>
* 产品不同，其溶解度不同。建议根据产品选择合适的溶剂配制储备溶液；配成溶液后，建议分装保存，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 (protect from light)。-80°C 储存时，建议在 6 个月内使用，-20°C 储存时，建议在 1 个月内使用。

体内研究:

建议根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都建议先按照 体外研究 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. 建议依照次序添加每种溶剂： 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。
</td></tr>
</table>

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。

将 0.9 g 氯化钠，完全溶解于 100 mL ddH?O 中，得到澄清透明的生理盐水溶液

2. 建议依照次序添加每种溶剂： 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。

将 2 g 磺丁基醚 β-环糊精加入 5 mL 生理盐水中，再用生理盐水定容至 10 mL，完全溶解，澄清透明

3. 建议依照次序添加每种溶剂： 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。

4. 建议依照次序添加每种溶剂： PBS

Solubility: 1 mg/mL (3.36 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

*