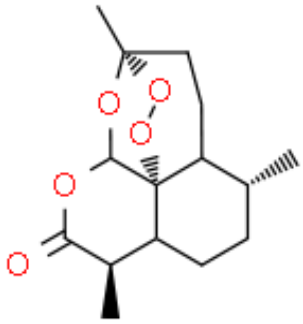
Product Data Sheet

Cas No.:	63968-64-9	Cat. No:	PC13514
Product Name:	Artemisinine.		
Product synonym:	青蒿素;(3R,5aS,6R,8aS,9R,10S,12R,12aR)-十氢-3,6,9-三甲基-3,12-桥氧-12H-吡喃并[4,3-j]-1,2-苯并二塞平-10-酮;黄蒿素;黄花蒿素;青蒿素(标准品);4-联苯乙二醛水合物;青蒿素对照品;青蒿素 USP标准品;青蒿素(HPLC级);青蒿素(P);青蒿素(UV级);青蒿素99;青蒿素标准品;青蒿提取物;青蒿油;双氢青蒿素;黄花素;青蒿素 黄蒿素		
Chemical name:	Artemisinine.		
MF:	C15H22O5	FW:	282.3322
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax:	-	Formulation:	-
Solubility :			
SMILES :	O1[C@@]23[C@]4([H])OC([C@]([H])(C([H])([H])[H])[C@]2([H])C([H])([H])C([H])([H])[C@@]([H])(C([H])([H])[H])[C@]3([H])C([H])([H])C([H])([H])C(C([H])([H])[H])(O1)O4)=O		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

Artemisinin是从青蒿 (Artemisia annua L.) 植物的地上部分分离的抗疟疾药物。

生物活性	Artemisinin (Qinghaosu), a sesquiterpene lactone, is an **anti-malarial** drug isolated from the aerial parts of *Artemisia annua* L. plants. Artemisinin inhibits AKT signaling pathway by decreasing **pAKT** in a dose-dependent manner. Artemisinin reduces cancer cell proliferation, migration, invasion, tumorigenesis and metastasis and has neuroprotective effects.
IC50 & Target[1][2]	Plasmodium

<table>
<tr><td>体外研究(In Vitro)</td><td>
Artemisinin (Qinghaosu) (25 or 50 μM; 24 hours) concentration-dependently suppresses Aβ25-35 induced cytotoxicity in PC12 cells.
Artemisinin (1-100?μM; 24? hours) selectively inhibits cancer cell growth in a dose-dependent manner with IC50 values of 31.30?±?0.73?μM in UMRC-2 cells and 23.97?±?0.92 CAKI-2 cells.
Artemisinin (25, 50?μM; 24?hours) suppresses the phosphorylation of AKT in UMRC-2 and CAKI-2 cells in a dose-dependent manner.

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

Cell Cytotoxicity Assay
<table>
<tr><td>Cell Line:</td><td>PC12 cells</td></tr>
<tr><td>Concentration:</td><td>25 or 50 μM</td></tr>
<tr><td>Incubation Time:</td><td>24 hours</td></tr>
<tr><td>Result:</td><td>Protected and rescue PC12 cells against Aβ25-35-induced cell death.</td></tr>
</table>
Cell Viability Assay
<table>
<tr><td>Cell Line:</td><td>RCC cells, RCC cell lines UMRC-2 and CAKI-2, and normal renal cell HK-2</td></tr>
<tr><td>Concentration:</td><td>1, 5, 10, 50, and 100?μM</td></tr>
<tr><td>Incubation Time:</td><td>24 hours</td></tr>
<tr><td>Result:</td><td>Selectively inhibited cancer cell growth in a dose-dependent manner.</td></tr>
</table>
Western Blot Analysis
<table>
<tr><td>Cell Line:</td><td>UMRC-2 and CAKI-2 cells</td></tr>
<tr><td>Concentration:</td><td>25, 50?μM</td></tr>
<tr><td>Incubation Time:</td><td>24 hours</td></tr>
<tr><td>Result:</td><td>Decreased pAKT in a dose-dependent manner.</td></tr>
</table>
</td></tr>
<tr><td>体内研究(In Vivo)</td><td>
Artemisinin (gavage; 20?mg/kg/day; for two weeks) suppresses UMRC-2 xenograft tumor growth.

Medlife has not independently confirmed the accuracy of these methods. They are for reference only.
<table>
<tr><td>Animal Model:</td><td>4-6 weeks old male nude mice</td></tr>
<tr><td>Dosage:</td><td>20?mg/kg</td></tr>
<tr><td>Administration:</td><td>gavage; every day for two weeks</td></tr>
<tr><td>Result:</td><td>Suppressed UMRC-2 xenograft tumor growth.</td></tr>
</table>
</td></tr>
<tr><td>包装储存</td><td>
<table>
<tr><td>Powder</td><td>-20°C</td><td>3 years</td></tr>
<tr><td></td><td>4°C</td><td>2 years</td></tr>
<tr><td>In solvent</td><td>-80°C</td><td>6 months</td></tr>
<tr><td></td><td>-20°C</td><td>1 month</td></tr>
</table>
</td></tr>
<tr><td></td><td>
体外研究:

DMSO : 50 mg/mL (177.10 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (ultrasonic) (insoluble)
</td></tr>
</table>

溶解度数据

配制储备溶液	溶剂体积 质量 浓度	1 mg	5 mg	10 mg
	1 mM	3.5420 mL	17.7098 mL	35.4195 mL
	5 mM	0.7084 mL	3.5420 mL	7.0839 mL
	10 mM	0.3542 mL	1.7710 mL	3.5420 mL

* 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。-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: ≥ 2.08 mg/mL (7.37 mM); Clear solution

   此方案可获得 ≥ 2.08 mg/mL (7.37 mM，饱和度未知) 的澄清溶液。

   以 1 mL 工作液为例，取 100 μL 20.8 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: ≥ 2.08 mg/mL (7.37 mM); Clear solution

   此方案可获得 ≥ 2.08 mg/mL (7.37 mM，饱和度未知) 的澄清溶液。

   以 1 mL 工作液为例，取 100 μL 20.8 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: ≥ 2.08 mg/mL (7.37 mM); Clear solution

   此方案可获得 ≥ 2.08 mg/mL (7.37 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 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL玉米油中，混合均匀。

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