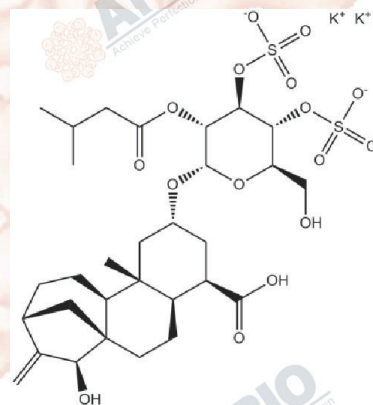


Product Data Sheet

Atractyloside Dipotassium Salt

Cat. No.:	A8188
CAS No.:	102130-43-8
Formula:	C ₃₀ H ₄₄ K ₂ O ₁₆ S ₂
M.Wt:	802.99
Synonyms:	
Target:	Apoptosis
Pathway:	Apoptosis Inducers
Storage:	Store at -20°C



Solvent & Solubility

≥37.05 mg/mL in DMSO; ≥51 mg/mL in EtOH; ≥110.4 mg/mL in H₂O

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	1.2453 mL	6.2267 mL	12.4535 mL
	5 mM	0.2491 mL	1.2453 mL	2.4907 mL
	10 mM	0.1245 mL	0.6227 mL	1.2453 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

AAT inhibitor

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: Ehrlich ascites tumor cells, J2-3T3 cells and cervical carcinoma cells

Preparation method:

The solubility of this compound in DMSO is > 37.05 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting conditions:

3 mM, 24 h

	Applications:	<p>In cultured Ehrlich ascites tumor cells, atractyloside (3 mM, 24 h) inhibited cell growth by 70% with not severe influence on cell viability. Atractyloside retarded cell cycle progression. After transfer of atractyloside treated cells to normal medium, proliferation and macromolecular synthesis normalized within 3 to 6 h. Atractyloside increased glucose consumption and lactate production. Lactate/glucose ratio was 1.9 after 24 h. Atractyloside reduced oxygen uptake. Atractyloside increased the ATP/ADP concentration ratio in the mitochondrial and extramitochondrial compartment. Atractyloside dose-dependently induced apoptosis in normal J2-3T3 cells and cervical carcinoma cells by loss of cell viability, nuclear fragmentation and DNA laddering. The sensitivity of cells to atractyloside-induced apoptosis was found to be: HPV 16 E6-J2-3T3 > CaSki > normal-J2-3T3 cells approximately ts p53-J2-3T3 approximately vector-J2-3T3 cells > Hela > SiHa > C33A approximately C33A 16 E6. Atractyloside can induce opening of the mitochondrial permeability transition pore (mPTP) in arteriolar smooth muscle cells (ASMCs). Treatment with 7.5, 10, and 15 μM atractyloside for 10 min significantly reduced the relative ATP content in ASMCs by 48%, 63% and 66% of control, and ASMCs were hyperpolarized.</p>
In Vivo	Animal experiment	
	Applications:	
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Zhu H, Ding Y, et al. "Prostaglandin E1 protects coronary microvascular function via the glycogen synthase kinase 3 β -mitochondrial permeability transition pore pathway in rat hearts subjected to sodium laurate-induced coronary microembolization." *Am J Transl Res*. 2017 May 15;9(5):2520-2534. PMID:28560002

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References

- [1]. Pick-Kober K H, Schneider F. Proliferation, macromolecular synthesis and energy metabolism of in vitro grown Ehrlich ascites tumor cells after inhibition of ATP-ADP translocation by atractyloside[J]. *European journal of cell biology*, 1984, 34(2): 323-329.
- [2]. Brown J, Higo H, Mckalip A, et al. Human papillomavirus (HPV) 16 E6 sensitizes cells to atractyloside - induced apoptosis: Role of p53, ICE - like proteases and the mitochondrial permeability transition[J]. *Journal of cellular biochemistry*, 1997, 66(2): 245-255.
- [3]. Song R, Bian H, Huang X, et al. Atractyloside induces low contractile reaction of arteriolar smooth muscle through mitochondrial damage[J]. *Journal of Applied Toxicology*, 2012, 32(6): 402-408.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX^xBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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