Atractyloside potassium salt

Product Number A 6882
Store at Room Temperature

Product Description
Molecular Formula: C₃₀H₄₄O₁₆S₂K₂
Molecular Weight: 803.0
CAS Number: 102130-43-8
Synonym: (2β,4α,15α)-15-hydroxy-2-[(2-O-(e-methyl-1-oxobutyl)-3,4-di-O-sulfo-β-D-glucopyranosyloxy]-19-norkaur-16-en-18-oic acid dipotassium salt

Atractyloside is an extremely toxic glucoside that is obtained from the Mediterranean thistle Atractylis gummifera. It inhibits oxidative phosphorylation by blocking the transfer of adenosine nucleotides through the mitochondrial membrane by the transport protein ATP-ADP translocase. Atractyloside binds to the ATP-ADP translocase after the protein has off-loaded its ATP into the cytosol and before it binds an ADP for transport into the mitochondrial matrix space. A protocol for the measurement of mitochondrial transmembrane potential in cells and in isolated mitochondria, including the use of atractyloside as one example of apoptotic induction, has been described.

Atractyloside has been used to probe the source of procaspase 8 in human fibroblasts and mouse clonal striatal cells, as related to death receptor-mediated apoptosis. Atractyloside induces the release of a hyaluronidase-induced murine WW domain-containing oxidoreductase from cultured COS-7 cells, with respect to tumor necrosis factor cytotoxicity.

An LC-MS/MS analysis of protein fractions isolated from atractyloside-treated mitochondria has been described. The inhibition of atractyloside-induced toxicity against rat renal cortical slices in vitro by various compounds, including calpain inhibitor I, has been studied.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in water (20 mg/ml), yielding a clear, very faint yellow solution. The maximum solubility of this product in water is approximately 25 mg/ml at 40 °C.

References
1. The Merck Index, 12th ed., Entry# 899.


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