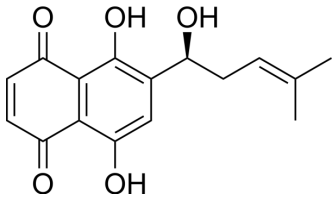
Alkannin

Cat. No.:	HY-119874
CAS No.:	23444-65-7
Molecular Formula:	$C_{16}H_{16}O_5$
Molecular Weight:	288.3
Target:	Pyruvate Kinase
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Alkannin is a potent and specific inhibitor of tumor-specific pyruvate kinase-M2 (PKM2). Alkannin does not inhibit PKM1 and pyruvate kinase-L (PKL). Alkannin acts as a potential anticancer agent[1].
In Vitro	Alkannin is a potent and specific inhibitor to PKM2, an enzyme that dictates the last rate-limiting step of glycolysis, which is essential for cancer cells' proliferation and survival. In the absence of D-fructose-1,6-bisphosphate (FBP), the IC_{50} of Alkannin is 0.3 μM. In the presence of FBP (125 μM), the IC_{50} of Alkannin is 0.9 μM, respectively. Alkannin effectively inhibits the cellular glycolytic flux in cancer cells dominantly expressing PKM2[1]. Alkannin (2.5-20 μM, 1 hour) inhibit the rates of cellular lactate production and glucose consumption[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	MCF-7 and A549 express PKM2 but not PKM1 and PKL
Concentration:	0-20 μM
Incubation Time:	1 hour
Result:	Inhibited the cellular glycolytic rate in a concentration-dependent manner.

REFERENCES

[1]. J Chen, et al. Shikonin and its analogs inhibit cancer cell glycolysis by targeting tumor pyruvate kinase-M2. Oncogene. 2011 Oct 20;30(42):4297-306.

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