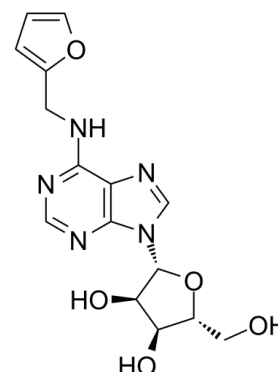


Data Sheet

Product Name:	Kinetin riboside
Cat. No.:	CS-6377
CAS No.:	4338-47-0
Molecular Formula:	C ₁₅ H ₁₇ N ₅ O ₅
Molecular Weight:	347.33
Target:	Apoptosis
Pathway:	Apoptosis
Solubility:	DMSO : 250 mg/mL (719.78 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Kinetin riboside, a cytokinin analog, can induce **apoptosis** in cancer cells. It inhibits the proliferation of HCT-15 cells with an **IC₅₀** of 2.5 μM. IC₅₀ & Target: IC₅₀: 2.5 μM (HCT-15 cells)^[1] **In Vitro:** Kinetin riboside displays antiproliferative and apoptogenic activity against various human cancer cell lines. Kinetin riboside is able to inhibit the proliferation in HCT-15 human colon cancer cells in a dose-dependent manner (IC₅₀=2.5 μM)^[1]. Kinetin riboside induces apoptosis in HeLa and mouse melanoma B16F-10 cells. Kinetin riboside disrupts the mitochondrial membrane potential and induces the release of cytochrome c and activation of caspase-3. Bad are up-regulated while Bcl-2 is down-regulated under kinetin riboside exposure^[2]. **In Vivo:** Kinetin riboside significantly suppresses tumor growth. The most effective anti-melanoma response is elicited at 40 mg/kg^[2].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: ^[2]HeLa and mouse melanoma B16F-10 cells are treated with 5, 10, 20 μM kinetin riboside for 48 h. 15 μL of MTT solution (5 mg/mL) is added to each well and cells are maintained for 4 h at 37°C. Hundred microlitres of solubilizing solution is then added. After an overnight incubation at room temperature, absorbance at 490 nm is measured^[2]. **Animal Administration:** ^[2]Mice: Male C57BL/6 mice are injected B16 F-10 cells. After 5 days for tumor growth, kinetin riboside (10, 20, 40 mg/kg) is injected to tumor mass directly. Drug injection is performed once a 3 days for three times. After third injection of drug, mice are kept for 3 days with no injection and tumor mass is removed from each mouse and weighed^[2].

References:

- [1]. Rajabi M, et al. Antiproliferative activity of kinetin riboside on HCT-15 colon cancer cell line. *Nucleosides Nucleotides Nucleic Acids*. 2012;31(6):474-81.
[2]. Choi BH, et al. Kinetin riboside preferentially induces apoptosis by modulating Bcl-2 family proteins and caspase-3 in cancer cells. *Cancer Lett*. 2008 Mar 8;261(1):37-45.

CAIndexNames:

Adenosine, N-(2-furanylmethyl)-

SMILES:

OC[C@@H]1[C@H]([C@H]([C@H](N2C=NC3=C2N=CN=C3NCC4=CC=CO4)O1)O)O

Caution: Product has not been fully validated for medical applications. For research use only.

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