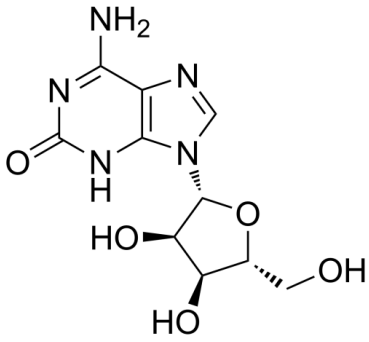
Data Sheet

Product Name:	Crotonoside
Cat. No.:	CS-0007114
CAS No.:	1818-71-9
Molecular Formula:	$C_{10}H_{13}N_5O_5$
Molecular Weight:	283.24
Target:	FLT3; HDAC
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Protein Tyrosine Kinase/RTK
Solubility:	DMSO : 25 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

Crotonoside is isolated from Chinese medicinal herb, Croton. Crotonoside inhibits **FLT3** and **HDAC3/6**, exhibits selective inhibition in acute myeloid leukemia (AML) cells. Crotonoside could be a promising new lead compound for the treatment of AML[1]. ***In Vitro:*** Crotonoside (0-200 μM;) selectively inhibits the viability of AML cell line MV4-11, MOLM-13 (with FLT3-ITD mutant) and KG-1 (without FLT3-ITD mutant) in a dose-dependent manner with an IC_{50} of 11.6 μM, 12.7 μM and 17.2 μM, respectively[1].
Crotonoside (0-100μM; 7 hours) inhibits the phosphorylation of FLT3 Erk1/2, Akt/mTOR and STAT5 is strongly inhibited by crotonoside at higher concentration of 12.5 μM in a concentration-dependent manner[1].
Crotonoside (0-100 μM; 12 hours) exhibits a dose-dependent increase in the percentage of G0/G1 phase and a dose-dependent decrease in the percentage of G2/M and S phases cells[1].
Crotonoside (0-100 μM; 24 hours) leads to concentration-dependent changes in the number of apoptotic MV4-11 cells, results in a dose-dependent decrease in the level of pro-caspase-3 and a dose-dependent increase in the level of the cleaved caspase-3 fragments[1].
In Vivo:Crotonoside(intraperitoneal and intravenous injection; 70 mg/kg, 35 mg/kg; once daily) induces a significant antitumor activity and inhibited xenograft tumor progress as compared to treatment with vehicle[1].

References:

[1]. Li YZ,et al. Crotonoside exhibits selective post-inhibition effect in AML cells via inhibition of FLT3 and HDAC3/6. Oncotarget. 2017 Sep 8;8(61):103087-103099.

CAIndexNames:

Adenosine, 2,3-dihydro-2-oxo-

SMILES:

OC[C@@H]1[C@H]([C@H]([C@H](N2C=NC(C(N)=N3)=C2NC3=O)O1)O)O

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

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