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## Product Data Sheet

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Product Name: Dehydroaltenusin

Cat. No.: GC35829

### Chemical Properties

Cas. No. 31186-13-7

SMILES O=C(C(O)=C1)C=C(C2=CC(OC)=CC(O)=C23)[C@@]1(C)OC3=O

Formula  $C_{15}H_{12}O_6$  M.Wt 288.25

Solubility Soluble in DMSO Storage Store at  $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at  $37^{\circ}C$  and shake it in the ultrasonic bath for a while. Stock solution can be stored below  $-20^{\circ}C$  for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Background

Dehydroaltenusin is a small molecule selective inhibitor of eukaryotic DNA polymerase  $\alpha$ , a type of antibiotic produced by a fungus with an  $IC_{50}$  value of  $0.68 \mu M$ . The inhibitory mode of action of dehydroaltenusin against mammalian pol  $\alpha$  activity is competitive with respect to the DNA template primer ( $K_i=0.23 \mu M$ ) and non-competitive with respect to the 2'-deoxyribonucleoside 5'-triphosphate substrate ( $K_i=0.18 \mu M$ ) [1]. Dehydroaltenusin arrests the cancer cell cycle at the S-phase and triggers apoptosis [1]. Dehydroaltenusin possesses anti-tumor activity against human adenocarcinoma tumor in vivo [1].  $IC_{50}$ :  $0.68 \mu M$  (DNA polymerase  $\alpha$ ) [1]

Dehydroaltenusin ( $38.0-44.4 \mu M$ ; 24 hours) inhibits cell growth in a dose-dependent manner and the  $LD_{50}$  values varies from  $38.0$  to  $44.4 \mu M$  [1]. Dehydroaltenusin ( $38.0 \mu M$ ; 6 hours) inhibits cell growth by blocking the S-phase of DNA replication [1]. Dehydroaltenusin ( $75.0 \mu M$ ; 24 hours) has a strong apoptotic effect on human cancer cells, DNA ladders can be detected after 12 h of incubation with dehydroaltenusin [1]. Cell Proliferation Assay [1] Cell Line: Human cancer cell line: A549, BALL-1, HeLa and NUGC-3 cells

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

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Dehydroaltenusin (injection; 20 mg/kg; 2-day intervals; 12-39 days) shows suppressed tumor growth from 21 days[1]. Animal Model: Nude mice bearing HeLa solid tumors[1]

[1]. Mizushina Y, et al. Dehydroaltenusin is a specific inhibitor of mammalian DNA polymerase  $\alpha$ . Expert Opin Investig Drugs. 2011 Nov;20(11):1523-34.

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