Data Sheet (Cat.No.TN3831)

TargetMol
A DRUG SCREENING EXPERT

Denudatin B

Chemical Properties

CAS No.:	87402-88-8
Formula:	C21H24O5
Molecular Weight:	356.42
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Denudatin B has nonspecific antiplatelet action at high concentration by inhibiting phosphoinositides breakdown induced by collagen and thrombin, it inhibits the aggregation and ATP release of washed rabbit platelets caused by platelet-activating factor (PAF) in a concentration-dependent manner. Denudatin B relaxes vascular smooth muscle by inhibiting the Ca2+ influx through voltage-gated and receptor-operated Ca2+ channels; its effect to increase cGMP may enhance the vasorelaxation. Denudatin B also shows potent 2, 2'-azino-bis (3-ethylbenzothiazoline-6-sulphonic acid) radical scavenging activity.
Targets(IC_{50})	ATPase: None Calcium Channel: None PAFR: None Potassium Channel: None
In vitro	METHODS AND RESULTS:Denudatin B, an isomer of kadsurenone, was isolated from Magnolia fargesii. It inhibited the aggregation and ATP release of washed rabbit platelets caused by platelet-activating factor (PAF) in a concentration-dependent manner. The IC50 on PAF (2 ng/ml)-induced aggregation was about 10 micrograms/ml. High concentration of Denudatin B (greater than 50 micrograms/ml) also inhibited the aggregation and ATP release of platelets caused by ADP, collagen, arachidonic acid and thrombin. However, shape change of platelets still existed. Prolongation of the incubation time with platelets could not cause further inhibition, and the aggregability of platelets could be restored after Denudatin B was washed out from platelets. Thrombin-induced thromboxane B2 formation was almost completely suppressed. In the absence of extracellular calcium (EGTA 1 mM), ATP release caused by thrombin was inhibited. Thrombin-induced rise of the intracellular calcium concentration was suppressed by Denudatin B, but not by BN52021 or kadsurenone. The generation of inositol phosphate in washed platelets caused by collagen, PAF and thrombin was also suppressed. CONCLUSIONS: The data indicate that PAF antagonist Denudatin B has nonspecific antiplatelet action at high concentration by inhibiting phosphoinositides breakdown induced by collagen and thrombin.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.806 mL	14.028 mL	28.057 mL
5 mM	0.561 mL	2.806 mL	5.611 mL
10 mM	0.281 mL	1.403 mL	2.806 mL
50 mM	0.056 mL	0.281 mL	0.561 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Inhibition of thrombin- and collagen-induced phosphoinositides breakdown in rabbit platelets by a PAF antagonist--denudatin B, an isomer of kadsurenone. Thromb Res. 1990 Jul 1;59(1):121-30.

2. Vasorelaxing effect in rat thoracic aorta caused by denudatin B, isolated from the Chinese herb, magnolia fargesii. Eur J Pharmacol. 1990 Oct 2;187(1):39-47.

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