

# PRODUCT INFORMATION



## Nalanthalide

Item No. 29724

**CAS Registry No.:** 145603-76-5  
**Formal Name:** 3-[[[(1R,4aR,5S,6S,8aR)-6-(acetyloxy)decahydro-5,8a-dimethyl-2-methylene-5-(4-methyl-3-penten-1-yl)-1-naphthalenyl]methyl]-2-methoxy-5,6-dimethyl-4H-pyran-4-one

**Synonym:** (-)-Nalanthalide

**MF:** C<sub>30</sub>H<sub>44</sub>O<sub>5</sub>

**FW:** 484.7

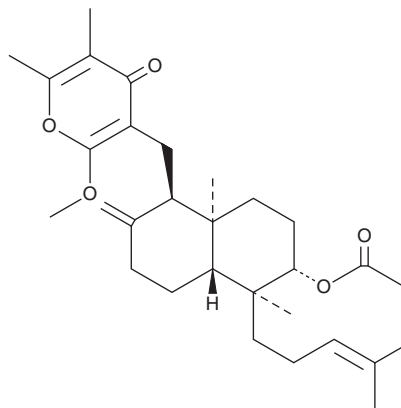
**Purity:** ≥70%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years

**Item Origin:** Fungus/Unidentified sp.



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Nalanthalide is supplied as a solid. A stock solution may be made by dissolving the nalanthalide in the solvent of choice, which should be purged with an inert gas. Nalanthalide is soluble in organic solvents such as ethanol, methanol, dichloromethane, and DMSO.

### Description

Nalanthalide is a diterpenoid pyrone fungal metabolite that has been found in *Nalanthamala* and has potassium channel inhibitory and antiviral activities.<sup>1</sup> It inhibits binding of the potassium channel inhibitor charybdotoxin (Item No. 24115) to Jurkat cell membranes (IC<sub>50</sub> = 3 μM) and inhibits rubidium efflux from CHO cells expressing the voltage-gated potassium (K<sub>v</sub>) channel K<sub>v</sub>1.3 (IC<sub>50</sub> = 3.9 μM). Nalanthalide depolarizes T cells *in vitro* with an EC<sub>50</sub> value of 500 nM. It also inhibits HIV-1 integrase activity with IC<sub>50</sub> values of 10 and 25 μM in coupled and strand transfer assays, respectively.<sup>2</sup>

### References

- Goetz, M.A., Zink, D.L., Dezeny, G., *et al.* Diterpenoid pyrones, novel blockers of the voltage-gated potassium channel Kv1.3 from fungal fermentations. *Tetrahedron Lett.* **42**(7), 1255-1257 (2001).
- Singh, S.B., Jayasuriya, H., Dewey, R., *et al.* Isolation, structure, and HIV-1-integrase inhibitory activity of structurally diverse fungal metabolites. *J. Ind. Microbiol. Biotechnol.* **30**(12), 721-731 (2003).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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