

PRODUCT INFORMATION



Penitrem A

Item No. 11347

CAS Registry No.: 12627-35-9
Formal Name: (2R,3S,3aR,4aS,4bS,6aR,7S,7dR,8R,9aR,14bS,14cR,16aS)-12-chloro-3,3a,6a,8,9,9a,10,11,14,14b,14c,15,16,16a-tetradecahydro-14b,14c,17,17-tetramethyl-10-methylene-2-(1-methylethenyl)-7,8-(epoxymethano)-2H,6H-cyclobuta[5,6]benz[1,2-e]oxireno[4',4'a]-1-benzopyrano[5',6':6,7]indeno[1,2-b]indole-3,4b,7d(5H,7H)-triol

Synonyms: NSC 354845, Tremortin A

MF: C₃₇H₄₄ClNO₆

FW: 634.2

Purity: ≥95%

UV/Vis.: λ_{max}: 235, 302 nm

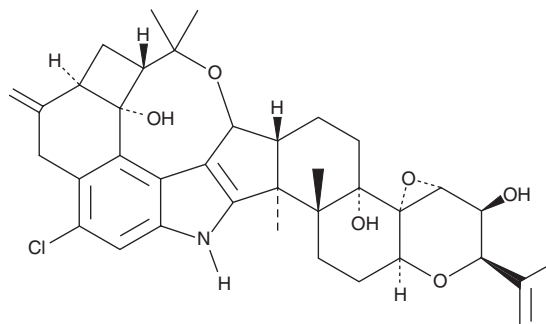
Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Fungus/*Penicillium palitans*

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



Laboratory Procedures

Penitrem A is supplied as a crystalline solid. A stock solution may be made by dissolving the penitrem A in the solvent of choice, which should be purged with an inert gas. Penitrem A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of penitrem A in ethanol is approximately 10 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Penitrem A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, penitrem A should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Penitrem A has a solubility of approximately 30 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Penitrem A is a tremorgenic fungal toxin that acts as an inhibitor of large-conductance calcium-activated potassium channels K_{Ca}1.1/BK, inhibiting the binding of charybdotoxin with an IC₅₀ value of 1.7 μM.¹ It is currently used to evaluate the role of K_{Ca}1.1-mediated potassium flux in various cell processes and responses.^{2,3}

References

1. Knaus, H.G., McManus, O.B., Lee, S.H., *et al.* Tremorgenic indole alkaloids potently inhibit smooth muscle high-conductance calcium-activated potassium channels. *Biochemistry* **33**(19), 5819-5828 (1994).
2. Asano, S., Tune, J.D., and Dick, G.M. Bisphenol A activates Maxi-K (K_{Ca}1.1) channels in coronary smooth muscle. *Br. J. Pharmacol.* **160**(1), 160-170 (2010).
3. Moldes-Anaya, A.S., Fonnum, F., Eriksen, G.S., *et al.* *In vitro* neuropharmacological evaluation of penitrem-induced tremorgenic syndromes: Importance of the GABAergic system. *Neurochem. Int.* **59**(7), 1074-1081 (2011).

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.

WARRANTY AND LIMITATION OF REMEDY

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