

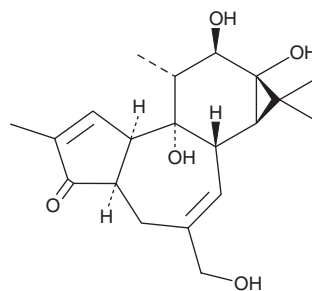
# PRODUCT INFORMATION



## 4-deoxy-4 $\alpha$ -Phorbol

Item No. 24998

**CAS Registry No.:** 37415-57-9  
**Formal Name:** 1,1aR,1bS,4,4aR,7aR,7bR,8R,9R,9aS-decahydro-7b,9,9a-trihydroxy-3-(hydroxymethyl)-1,1,6,8-tetramethyl-5H-cyclopropa[3,4]benz[1,2-e]azulen-5-one  
**MF:** C<sub>20</sub>H<sub>28</sub>O<sub>5</sub>  
**FW:** 348.4  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 238 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 2 years



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

### Laboratory Procedures

4-deoxy-4 $\alpha$ -Phorbol is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-deoxy-4 $\alpha$ -phorbol in the solvent of choice. 4-deoxy-4 $\alpha$ -Phorbol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 4-deoxy-4 $\alpha$ -phorbol in DMSO and DMF is approximately 30 mg/ml. It is also slightly soluble in ethanol.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 4-deoxy-4 $\alpha$ -phorbol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 4-deoxy-4 $\alpha$ -phorbol in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

4-deoxy-4 $\alpha$ -Phorbol is a tetracyclic diterpene found in croton oil.<sup>1,2</sup> It has been used in the semisynthesis of inhibitors of the HIV-1-induced cytopathic effect on MT-4 cells and 4 $\alpha$ -phorbol esters.

### References

1. El-Mekawy, S., Meselhy, M.R., Abdel-Hafez, A.A., *et al.* Inhibition of cytopathic effect of human immunodeficiency virus type-1 by various phorbol derivatives. *Chem. Pharm. Bull. (Tokyo)* **50(4)**, 523-529 (2002).
2. Klausen, T.K., Pagani, A., Minassi, A., *et al.* Modulation of the transient receptor potential vanilloid channel TRPV4 by 4 $\alpha$ -phorbol esters: A structure-activity study. *J. Med. Chem.* **52(9)**, 2933-2939 (2009).

#### 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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