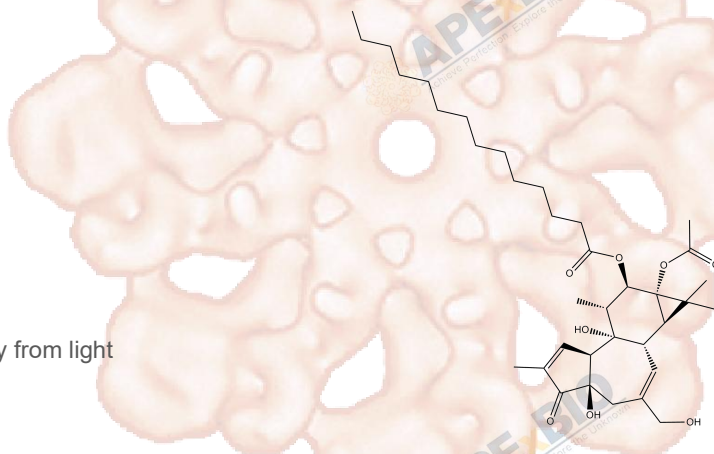


Product Data Sheet

12-O-tetradecanoyl phorbol-13-acetate (PMA)

Cat. No.:	N2060
CAS No.:	16561-29-8
Formula:	C ₃₆ H ₅₆ O ₈
M.Wt:	616.83
Synonyms:	
Target:	Natural Products
Pathway:	
Storage:	-20° C, sealed storage, away from light



Solvent & Solubility

insoluble in H₂O; ≥112.9 mg/mL in DMSO; ≥80 mg/mL in EtOH

In Vitro	Preparing Stock Solutions	Solvent Concentration	Mass	1mg	5mg	10mg
		1 mM		1.6212 mL	8.1060 mL	16.2119 mL
		5 mM		0.3242 mL	1.6212 mL	3.2424 mL
		10 mM		0.1621 mL	0.8106 mL	1.6212 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

ERK activator, potent

IC₅₀ & Target

Cell Viability Assay

In Vitro

Cell Line:	B-lymphocyte cell line
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37° C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20° C for several months.

In Vivo	Reacting conditions:	1 nM
	Applications:	12-O-tetradecanoyl phorbol-13-acetate was used for the activation of PKC (protein kinase C) in cells.
	Animal experiment	
	Animal models:	Chemical skin carcinogenesis mice
	Dosage form:	Twice weekly treatment (12.5 μ g in 100 μ L acetone)
	Applications:	12-O-tetradecanoyl phorbol-13-acetate was used to induce skin cancer in mice.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Suqin Zhu, Qi Gu, et al. "Oleanolic Acid Up - Regulated UGT1A1 and Antagonized Inflammation by Affecting the Binding of PXR and PKC α to HSP90 α and SRC1." *Phytother Res.* 2025 Jul;39(7):3167-3181 PMID: 40420319
2. Yuqi Wang, Yunlong Zhang, et al. "Programmed cell death-related gene IL20RA facilitates tumor progression and remodels tumor microenvironment in thyroid cancer." *Sci Rep.* 2025 Jan 28;15(1):3520 PMID: 39875436
3. Hui Xu, Xin Li, et al. "PM2.5 Promotes Macrophage-Mediated Inflammatory Response Through Airway Epithelial Cell-Derived Exosomal miR-155-5p." *J Inflamm Res.* 2024 Nov 9;17:8555-8567 PMID: 39539727
4. Si Liu, Yan Wang, et al. "Quercetin Mitigates Lysophosphatidylcholine (LPC)-Induced Neutrophil Extracellular Traps (NETs) Formation through Inhibiting the P2X7R/P38MAPK/NOX2 Pathway." *Int J Mol Sci.* 2024 Aug 30;25(17):9411 PMID: 39273358
5. Qi Jing, Rui Liu, et al. "Staphylococcus aureus wraps around Candida albicans and synergistically escapes from Neutrophil extracellular traps." *Front. Immunol.*, 10 July 2024.

See more customer validations on www.apexbt.com.

References

- [1] Castagna M, et al. Direct activation of calcium-activated, phospholipid-dependent protein kinase by tumor-promoting phorbol esters. *J Biol Chem.* 1982 Jul 10;257(13):7847-51.
- [2] Jensen WA, et al. Inhibition of protein kinase C results in decreased expression of bovine leukemia virus. *J Virol.* 1992 Jul;66(7):4427-33.
- [3] Rushworth LK, et al. Dual-specificity phosphatase 5 regulates nuclear ERK activity and suppresses skin cancer by inhibiting mutant Harvey-Ras (HRasQ61L)-driven SerpinB2 expression. *Proc Natl Acad Sci U S A.* 2014 Dec 23;111(51):18267-72.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX-BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage

temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



APEx BIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

