

Product Data Sheet

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

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| Cat. No.: | N2060 |
| CAS No.: | 16561-29-8 |
| Formula: | C36H56O8 |
| M.Wt: | 616.83 |
| Synonyms: | |
| Target: | Natural Products |
| Pathway: | |
| Storage: | Store at -20°C |



Solvent & Solubility

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

| In Vitro | Preparing Stock Solutions | Mass | | | |
|----------|---------------------------|-----------------------|-----------|-----------|------------|
| | | Solvent Concentration | 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.

| | | |
|---------|--------------------------|--|
| | Reacting conditions: | 1 nM |
| | Applications: | 12-O-tetradecanoyl phorbol-13-acetate was used for the activation of PKC (protein kinase C) in cells. |
| In Vivo | Animal experiment | |
| | Animal models: | Chemical skin carcinogenesis mice |
| | Dosage form: | Twice weekly treatment (12.5 µg in 100 µL 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.Li L, Ge C, et al. "Dehydroepiandrosterone reduces accumulation of lipid droplets in primary chicken hepatocytes by biotransformation mediated via the cAMP/PKA-ERK1/2 signaling pathway." *Biochim Biophys Acta*. 2018 Mar 20;1863(6):625-638.PMID:29571766

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. Short-term 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.

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