Product overview

Name: Phorbol 12-myristate 13-acetate (PMA)
Cat No: HB0502
Short description: PKC activator

Biological description:
Phorbol 12-myristate 13-acetate (PMA) is a protein kinase C (PKC) activator which associates to the C1 domain. It is structurally analogous to diacylglycerol.

PMA is a potent tumor promoter.

PMA induces ERK1/2 activation and is frequently used with ionomycin to stimulate intracellular cytokine production in T-cells.

PMA also facilitates long term potentiation in hippocampal neurons via δ and ε PKC binding sites.

Alternative names: PMA; TPA
Biological action: Activator
Purity: >99%

Customer comments:
Shipping at RT but it works properly. cheap and quick delivery. Verified customer, Seoul National University
**Properties**

**Chemical name**

\((1\text{a}R,1\text{b}S,4\text{a}R,7\text{a}S,7\text{b}S,8\text{R},9\text{R},9\text{a}S)-9\text{a}-(\text{Acetyloxy})-1\text{a},1\text{b},4,4\text{a},5,7\text{a},8,9,9\text{a}-\text{decahydro-4a,7b-dihydroxy-3-(hydroxymethyl)-1,1,6,8-tetramethyl-5-oxo-1H-cyclopropa[3,4]benz[1,2-e]azulen-9-yl tetradecanoate}\)

**Molecular Weight**

616.83

**Chemical structure**

![Chemical structure image]

**Molecular Formula**

\(\text{C}_{36}\text{H}_{56}\text{O}_{8}\)

**CAS Number**

16561-29-8

**PubChem identifier**

27924

**SMILES**

```
CCCCCCCCCCCCC(=O)O[C@@H][C@H][C@]2[C@@H](C=C(C[C@]3(C=C(O)C)O)CO)[C@H]4[C@@]1(C4(C)C)OC(=O)C)O)C
```

**InChi**

```
InChI=1S/C36H56O8/c1-7-8-9-10-11-12-13-14-15-16-17-18-29(39)43-32-24(3)35(42)27(30-33(5,6)36(30,32)44-25(4)38)20-26(22-37)21-34(41)28(35)19-23(2)31(34)40/h19-20,24,27-28,30,32,37,41-42H,7-18,21-22H2,1-6H3/t24-,27+,28-,30-,32-,34-,35-,36-/m1/s1
```

**InChiKey**

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PHEDXBVPIONUQT-RGYGYFBISA-N
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**MDL number**

MFCD00036736

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**Storing and Using Your Product**

**Storage instructions**

-20°C (protect from light)

**Solubility overview**

Soluble in DMSO (100mM)

**Important**

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

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**References for Phorbol 12-myristate 13-acetate (PMA)**

**Phorbol 12-myristate 13-acetate inhibits P-glycoprotein-mediated efflux of digoxin in MDCKII-MDR1 and Caco-2 cell monolayer models.**


PubMedID: 24362330

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**Phorbol ester phorbol-12-myristate-13-acetate promotes anchorage-independent growth and survival of melanomas through MEK-independent activation of ERK1/2.**


PubMedID: 15721302

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**Involvement of PKC alpha in PMA-induced facilitation of exocytosis and vesicle fusion in PC12 cells.**


PubMedID: 19250646
Phorbol 12-Myristate 13-Acetate Enhances Long-Term Potentiation in the Hippocampus through Activation of Protein Kinase Cδ and ε.


PubMedID: 23440225