

Phosphate tris(acetoxymethyl)ester (PO4-AM3) Biochemical

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CATALOG #
AAA52686

PRODUCT SYNONYMS

Phosphate tris(acetoxymethyl)ester (PO4-AM3); Phosphate tris(acetoxymethyl)ester (PO4-AM3) biochemical

PRODUCT SPECIFICATIONS

Specificity	Micromolar quantities are determined by weight. 0.33 μ mol of PO4-AM3 is stoichiometrically equivalent to 1 μ mol of a cyclic nucleotide-AM ester.
Purity/Purification	Typical analysis is better than 95% (MS). The product is not sterile and has not been tested for endotoxins
Properties	PO4-AM3 is a membrane-permeable prodrug of inorganic phosphate. The acetoxymethyl groups mask the charged polar phosphate and thus render the molecule highly membrane-permeant. Inside the cell esterases release the highly polar inorganic phosphate (PO ₄ ³⁻). In addition, the AM ester groups liberate acetic acid and formaldehyde, two metabolites with potential biological functions. PO ₄ -AM ₃ is recommended as control reagent in nucleotide-AM ester applications to test for side effects of acetic acid and formaldehyde.
Solubility	Due to its rather high lipophilicity, the solubility of PO4-AM3 in water or buffers is limited. We suggest to use a small amount of anhydrous organic solvent such as anhydrous DMSO or DMF for preparation of 1-100 mM stock solutions, and to dilute with water or buffer down to the concentrations required. In some cases, especially at high concentrations (~1 mM), Pluronic® F-127 (Molecular Probes) can be useful to facilitate solubilization in water or physiological media. Please be sure to check for DMSO/DMF tolerance in your system. Since PO4-AM3 is bioactivated by esterases, application to cell cultures should be performed without serum supplements (even heat-inactivated serum still contains active esterases!) in the media for at least 15 minutes. Otherwise, serum esterases may strongly reduce the cell-loading efficacy. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing.
Formula	C ₉ H ₁₅ O ₁₀ P
CAS No	[148334-61-6]
Preparation and Storage	PO4-AM3 is sufficiently stable to be shipped at ambient temperature, however, it should be stored in the freezer (-20°C necessary, -80°C recommended). Please note that aqueous solutions are rather labile and should be freshly prepared immediately before use. Stock solutions in anhydrous DMSO or DMF should be relatively stable when stored frozen at -20°C to -80°C.

IMAGES



Structure

ADDITIONAL INFORMATION

Related Product Information for Phosphate tris(acetoxymethyl)ester (PO4-AM3) biochemical	In PO ₄ -AM ₃ three acetoxymethyl (AM) ester groups are connected to inorganic phosphate
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NCBI AND UNIPROT INFORMATION

Molecular Weight	314.2
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For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/biochemical/phosphate-tris-acetoxymethyl-ester-po4-am3/52686>