



Certificate of Analysis

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Product Name: Adenosine 5'-(α,β-methylene)diphosphate sodium salt Catalog No.: 3633 Batch No.: 3

CAS Number: 89016-30-8

IUPAC Name: α, β -Methyleneadenosine 5'-diphosphate monosodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{11}H_{16}N_5NaO_9P_2$

Batch Molecular Weight: 447.21

Physical Appearance: Colourless liquid

Solubility: Soluble in water (supplied pre-dissolved at a concentration of 10mM)

Storage: Store at -20°C

Batch Molecular Structure:

2. ANALYTICAL DATA

HPLC: Shows 100% purity

Mass Spectrum: Consistent with structure

Product Information

Print Date: Aug 8th 2023

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CAS Number: 89016-30-8

IUPAC Name: α,β -Methyleneadenosine 5'-diphosphate monosodium salt

Description:

Adenosine 5'-(α , β -methylene)diphosphate sodium salt is an ecto-5'-nucleotidase/CD73 inhibitor. Blocks ecto-5'-nucleotidase-mediated adenosine production by preventing the conversion of AMP to adenosine. Reverses the doxorubicin-resistance in ecto-5'-nucleotidase-positive MDR cells (MCF7/A6 and L1210/A). Also increases rhodamine uptake and inhibits rhodamine efflux from ecto-5'-nucleotidase-positive MDR cells. Vasoconstrictor.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₁H₁₆N₅NaO₉P₂

Batch Molecular Weight: 447.21

Physical Appearance: Colourless liquid

Minimum Purity: ≥98%

Batch Molecular Structure:

Storage: Store at -20°C

Solubility & Usage Info:

Soluble in water (supplied pre-dissolved at a concentration of 10mM)

This compound is supplied in aqueous solution at a concentration of 10mM.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Chen et al (2019) Asthmatic augmentation of airway vagal activity involves decreased central expression and activity of CD73 in rats. ACS Chem.Neurosci. **10** 2809. PMID: 30913879.

Kur et al (2014) Purinergic control of vascular tone in the retina. J.Physiol. 592 491. PMID: 24277867.

Niemelä et al (2008) IFN-beta regulates CD73 and adenosine expression at the blood-brain barrier. Eur.J.Immunol. 38 2718. PMID: 18825744.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use