Certificate of Analysis

Product Name: **MRS 2365** **Catalog No.: 2157** **Batch No.: 5**

IUPAC Name: [[(1*R*,2*R*,3*S*,4*R*,5*S*)-4-[6-Amino-2-(methylthio)-9*H*-purin-9-yl]-2,3-dihydroxybicyclo[3.1.0]hex-1-yl]methyl] diphosphoric acid mono ester trisodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{13}H_{16}N_5O_9P_2SNa_3$

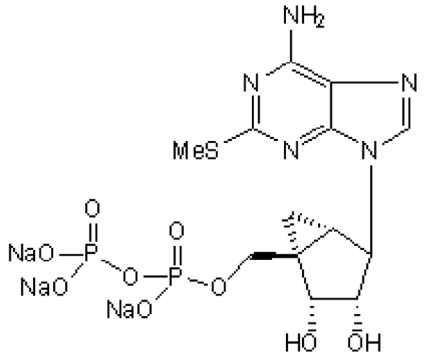
Batch Molecular Weight: 549.28

Physical Appearance: Colourless liquid

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

Storage: Store at -80°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

Mass Spectrum: Consistent with structure

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Description:

MRS 2365 is a highly potent, selective $P2Y_1$ receptor agonist (EC_{50} = 0.4 nM). Displays no activity at $P2Y_{12}$ receptors and only very low agonist activity at $P2Y_{13}$ receptors (at concentrations up to 1 µM). Increases the upregulation of NTPDase1 by ATPγS.

Physical and Chemical Properties:

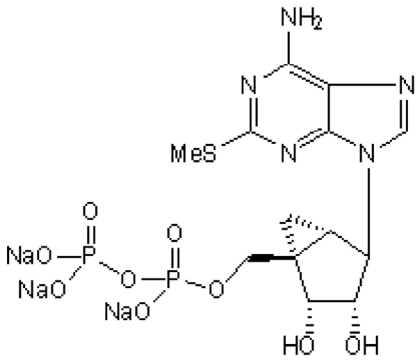
Batch Molecular Formula: $C_{13}H_{16}N_5O_9P_2SNa_3$

Batch Molecular Weight: 549.28

Physical Appearance: Colourless liquid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -80°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.

Licensing Information:

Sold under license from the NIH, US Patent 10/169975

References:

Lu *et al* (2007) Stimulation of the $P2Y_1$ receptor up-regulates nucleoside-triphosphate diphosphohydrolase-1 in human retinal pigment epithelial cells. J.Pharmacol.Exp.Ther. ***323*** 157. PMID: 17626796.

Chhatriwala *et al* (2004) Induction of novel agonist selectivity for the ADP-activated $P2Y_1$ receptor versus the ADP-activated $P2Y_{12}$ and $P2Y_{13}$ receptors by conformational constraint of an ADP analog. J.Pharmacol.Exp.Ther. ***311*** 1038. PMID: 15345752.

Ravi *et al* (2002) Adenine nucleotide analogues locked in a northern methanocarba conformation: enhanced stability and potency as $P2Y_1$ receptor agonists. J.Med.Chem. ***45*** 2090. PMID: 11985476.