

Product Name: IB-MECA

Catalog No.: 1066

Batch No.: 3

CAS Number: 152918-18-8

IUPAC Name: 1-Deoxy-1-[6-[[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-N-methyl-β-D-ribofuranuronamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₉IN₆O₄.2H₂O

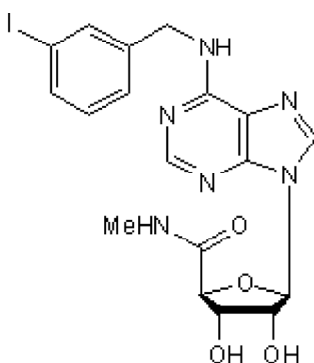
Batch Molecular Weight: 546.32

Physical Appearance: White solid

Solubility: DMSO to 25 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.35 (Dichloromethane:Methanol [10:1])

Melting Point: Between 175 - 177°C

HPLC: Shows 97.6% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	39.57	4.24	15.38
Found	39.37	3.89	15.28

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

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Description:

IB-MECA is a potent and selective A₃ adenosine receptor agonist (K_i values are 1.1, 54 and 56 nM for A₃, A₁ and A_{2A} receptors respectively). Cardioprotective, reduces infarct size upon reperfusion in rats.

Physical and Chemical Properties:

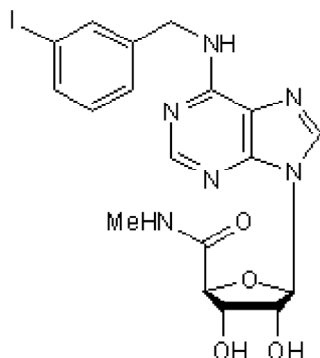
Batch Molecular Formula: C₁₈H₁₉IN₆O₄·2H₂O

Batch Molecular Weight: 546.32

Physical Appearance: White solid

Minimum Purity: ≥97%

Batch Molecular Structure:



Storage: Desiccate at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 25 mM

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 with the permission of the NIH, US Patent 08/091,109

References:

Park et al (2006) N⁶-(3-iodobenzyl)-adenosine-5'-N-methylcarboxamide confers cardioprotection at reperfusion by inhibiting mitochondrial permeability transition pore opening via glycogen synthase kinase 3β. *J.Pharmacol.Exp.Ther.* **318** 124. PMID: 16611852.

Klotz (2000) Adenosine receptors and their ligands. *Naunyn Schmiedebergs Arch.Pharmacol.* **362** 382. PMID: 11111832.

Gallo-Rodriguez et al (1994) Structure-activity relationships of N⁶-benzyladenosine-5'-uronamides as A₃-selective adenosine agonists. *J.Med.Chem.* **37** 636. PMID: 8126704.

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