

Certificate of Analysis

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Product Name: POM 1
CAS Number: 12141-67-2
IUPAC Name: Sodium metatungstate

Catalog No.: 2689 **Batch No.:** 3
EC Number: 412-770-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $H_2O_{40}Na_6W_{12}$
Batch Molecular Weight: 2986.01
Physical Appearance: White solid
Solubility: water to 100 mM
Storage: Store at RT
Batch Molecular Structure: $3Na_2WO_4 \cdot 9WO_3 \cdot H_2O$

2. ANALYTICAL DATA

%W03 by gravimetry: 93.5%

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

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IUPAC Name: Sodium metatungstate

Description:

POM 1 is an inhibitor of Ecto-NTPDases that displays minor selectivity for NTPDases 1 and 2 over NTPDase 3 and P2Y₁₂ (K_i values are 2.58, 3.26, > 10 and 28.8 μM for NTPDase 1, NTPDase 3, P2Y₁₂ and NTPDase 2 respectively). Abolishes renal protection induced by ischemic preconditioning. Inhibits synaptic transmission at hippocampal CA1 pyramidal synapses and at the cerebellar parallel fiber-Purkinje cell (PF) synapse.

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Batch Molecular Weight: 2986.01

Physical Appearance: White solid

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 100 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. Our standard recommendations are:

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:

Wall et al (2008) The novel NTPDase inhibitor sodium polyoxotungstate (POM-1) inhibits ATP breakdown but also blocks central synaptic transmission, an action independent of NTPDase inhibition. *55* 1251. PMID: 18768144.

Grenz et al (2007) Contribution of E-NTPDase1 (CD39) to renal protection from ischemia-reperfusion injury. *FASEB J.* **21** 2863. PMID: 17442731.

Muller et al (2006) Polyoxometalates - a new class of potent ecto-nucleoside triphosphate diphosphohydrolase (NTPDase) inhibitors. *Bioorg.Med.Chem.Lett.* **16** 5943. PMID: 16997558.

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