bio-techne
TOCRIS

Print Date: Feb 25th 2025

Certificate of Analysis

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Product Name: **Phosphoramidon disodium salt** **Catalog No.: 6333** **Batch No.: 1**

CAS Number: 164204-38-0

IUPAC Name: *N*-[*N*-[[(6-Deoxy-α-L-mannopyranosyl)oxy]hydroxyphosphinyl]-L-leucyl]-L-tryptophan disodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{23}H_{32}N_3Na_2O_{10}P$

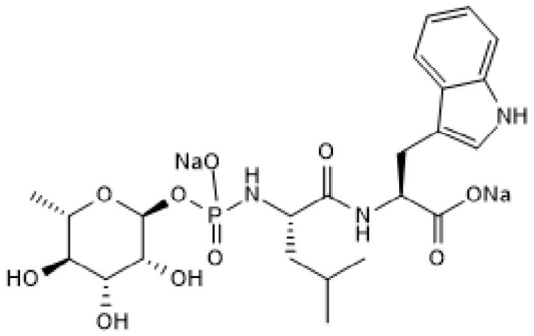
Batch Molecular Weight: 587.47

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.7% purity

Mass Spectrum: Consistent with structure

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Description:

Phosphoramidon disodium salt is a neutral endopeptidase (neprilysin) inhibitor. Blocks degradation of amyloid β peptides and increases Aβ levels in rodents. Also blocks endothelin converting enzyme (ECE).

Physical and Chemical Properties:

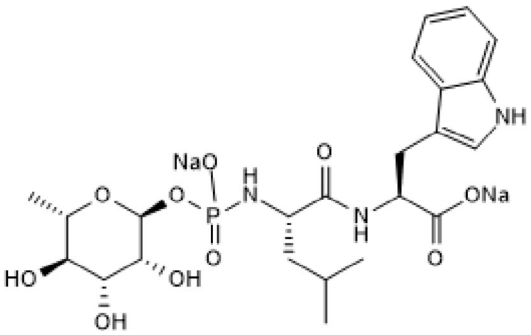
Batch Molecular Formula: $C_{23}H_{32}N_3Na_2O_{10}P$

Batch Molecular Weight: 587.47

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM

This compound is hygroscopic and may absorb atmospheric moisture during prolonged storage, causing the solid to become sticky and/or collapse into a gel or glass-like form. Although purity is unaffected, it may be difficult to extract the full quantity from the vial. In such a situation, we recommend that solutions are made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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:

Marr and Hafez (2014) Amyloid-beta and Alzheimer's disease: the role of neprilysin-2 in amyloid-beta clearance. Front.Aging Neurosci. ***6*** 187. PMID: 25165447.

Shirotani *et al* (2001) Neprilysin degrades both amyloid β peptides 1-40 and 1-42 most rapidly and efficiently among thiorphan- and phosphoramidon-sensitive endopeptidases. J.Biol.Chem. ***276*** 21895. PMID: 11278416.

Warner *et al* (1992) Regional differences in endothelin converting enzyme activity in rat brain: inhibition by phosphoramidon and EDTA. Br.J.Pharmacol. ***106*** 948. PMID: 1393292.