

Certificate of Analysis

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Product Name: MB 05032

Catalog No.: 6618

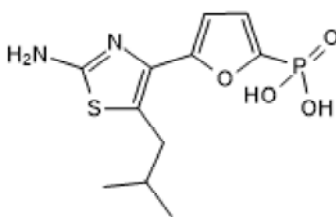
Batch No.: 1

CAS Number: 261365-11-1

IUPAC Name: *P*-[5-[2-Amino-5-(2-methylpropyl)-4-thiazolyl]-2-furanyl]phosphonic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₁₅N₂O₄PS
Batch Molecular Weight: 302.29
Physical Appearance: Off White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.2% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	43.71	5	9.27
Found	43.72	4.98	9.16

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

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Description:

Potent FBPase inhibitor (EC_{50} values are 1.6, 29 and 61 nM for human liver FBPase, human muscle FBPase and rat liver FBPase). Promotes hematopoietic stem cell and progenitor cell expansion. Increases engraftment in primary NSG mice recipients. Also enhances myeloid and lymphoid chimerism in secondary NSG mouse recipients. Promotes glycolysis, glucose uptake and lactate production in umbilical cord blood CD34⁺ cells.

Physical and Chemical Properties:

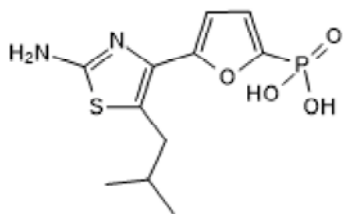
Batch Molecular Formula: C₁₁H₁₅N₂O₄PS

Batch Molecular Weight: 302.29

Physical Appearance: Off White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO 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:

Guo *et al* (2018) Antagonism of PPAR-γ signaling expands human hematopoietic stem and progenitor cells by enhancing glycolysis. *Nat.Med.* **24** 360. PMID: 29377004.

van Poelje *et al* (2011) Fructose-1, 6-bisphosphatase inhibitors for reducing excessive endogenous glucose production in type 2 diabetes. *Handb.Exp.Pharmacol.* **203** 279. PMID: 21484576.

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