PRODUCT SPECIFICATION

AICAR 50 mg

Acadesine — a cell-permeable nucleoside analogue that activates AMP-activated protein kinase, supplied as a lyophilized research compound.

CAS NUMBER	MOLECULAR WEIGHT	PURITY	PHYSICAL FORM
2627-69-2	258.23 g/mol	≥ 99% (HPLC)	Lyophilized powder

1 PRODUCT IDENTIFICATION

Product Name	AICAR 50 mg
Product Code	PCR-AICAR-50
Compound Type	Small molecule — nucleoside analogue; not a peptide
IUPAC Name	5-Amino-1-[(2R,3R,4S,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-1H-imidazole-4-carboxamide
Synonyms / Other Names	Acadesine; AICA-riboside; 5-aminoimidazole-4-carboxamide ribonucleoside; ZMP precursor
Molecular Target	AMP-activated protein kinase (AMPK), via intracellular conversion to ZMP
Vial Contents	50 mg lyophilized powder, single vial
Research Category	Metabolic research compound

2 CHEMICAL AND PHYSICAL PROPERTIES

CAS Number	2627-69-2 (nucleoside)
PubChem CID	17513
Molecular Formula	$C_9H_{14}N_4O_5$
Molecular Weight	258.23 g/mol
Related Species	The intracellular phosphorylated form, ZMP (AICA ribonucleotide, CAS 3031-94-5), is a different compound with a different mass and is not what is supplied here
Appearance	White to off-white powder
Physical State	Lyophilized solid
Purity	≥ 99% by HPLC

RESEARCH USE ONLY — NOT FOR HUMAN OR VETERINARY USE. This document is not a Certificate of Analysis; batch-specific data is issued per lot.

3 SOLUBILITY AND RECONSTITUTION

Solubility	Freely soluble in water (specification > 7 mg/mL); slightly soluble in DMSO
Recommended Diluent	Bacteriostatic water — supplied complimentary with every order
Solution Handling	Prepare fresh, keep cold, protect from light, and avoid repeated freeze-thaw cycles

Note: our vials hold 3 ml, so a 50 mg vial at full working volume gives about 16.7 mg/mL.

4 STORAGE AND STABILITY

Storage — Sealed Vial	Freeze at ≤ −20 °C, sealed, away from light and moisture
Shelf Life — Sealed	Approximately 24 months under recommended storage conditions
Storage — After Reconstitution	Refrigerate at 2–8 °C, protected from light
In-Use Period	28–30 days after reconstitution
Conditions to Avoid	Heat, direct light, moisture, and repeated freeze-thaw cycles

5 QUALITY ASSURANCE AND DOCUMENTATION

Analytical Method	Reverse-phase high-performance liquid chromatography (HPLC)
Batch Testing	Independent third-party analysis for identity, purity, and contaminants
Certificate of Analysis	Issued per batch — available at peptidescostarica.net/lab-tests-coa-results/
Batch / Lot Number	Refer to the vial label and the accompanying Certificate of Analysis

6 INTENDED USE, REGULATORY AND ANTI-DOPING STATUS

Intended Use	Research Use Only (RUO) — laboratory, analytical, and scientific applications
Uses Advised Against	Not for human or veterinary use. Not a drug, food, cosmetic, dietary supplement, or household product. Not for diagnostic or therapeutic use.
Anti-Doping Status	**Prohibited in sport.** AICAR is on the WADA Prohibited List as an AMPK activator (Hormone and Metabolic Modulators, S4), banned both in and out of competition since 2009.
Regulatory Status	Not approved or licensed by the U.S. FDA, the EMA, or Costa Rica's Ministerio de Salud for any use.
Distribution	Supplied within Costa Rica

SUPPLIER
Peptides Costa Rica
Curridabat, San José 11801
Costa Rica

CONTACT
info@peptidescostarica.net
CR +506 8404-6973
US +1 (831) 471-5559

DOCUMENTATION
peptidescostarica.net
COA database:
/lab-tests-coa-results/

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