

Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customer-care-usa@m2stage.hellobio.com



DATASHEET

AICAR

Product overview

Name	AICAR
Cat No	HB2152
Biological action	Activator
Purity	>99%
Description	AMPK activator. Promotes osteogenic differentiation of bone marrow-derived MSCs.

Biological Data

Biological description	Cell permeable AMP-activated protein kinase (AMPK) activator. Down-regulates insulin receptor expression. Promotes differentiation and mineralization of MC3T3-E1 osteoblastic cells. Also promotes osteogenic differentiation of mesenchymal stem cells and induces astroglial differentiation in neural stem cells. Additionally induces expression of several key regulators of pluripotency in somatic cells.
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Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in water (75mM) or DMSO (75mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	N ¹ -(β-D-Ribofuranosyl)-5-aminoimidazole-4-carboxamide
Molecular Weight	258.23
Chemical structure	The chemical structure shows a ribose sugar in its furanose form, attached at the C5 position of an imidazole ring. The imidazole ring has an amino group (-NH2) at position 4 and a carboxamide group (-CONH2) at position 2. The ribose has hydroxyl groups at positions 2' and 3'.
Molecular Formula	C ₉ H ₁₄ N ₄ O ₅
CAS Number	2627-69-2
PubChem identifier	17513
SMILES	<chem>O[C@@H]1[C@@H](CO)O[C@@H](N2C=NC(C(N)=O)=C2N)[C@@H]1O</chem>
InChIKey	RTRQQBHATOEIAF-UHFFFAOYSA-N
Appearance	Off-white solid