



LKT Laboratories, Inc.

AICAR

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Product Information

Product ID A3208

CAS No. 2627-69-2

Chemical Name 5-Amino-1-(β-D-ribofuranosyl)-1H-imidazole-4-carboxamide

Synonym 5-aminoimidazole-4-carboxamide-1-β-D-ribofuranoside

Formula C₉H₁₄N₄O₅

Formula Wt. 258.23

Melting Point

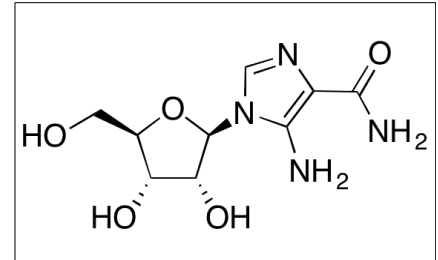
Purity ≥98%

Solubility Soluble in water (9 mg/ml),
DMSO or dimethyl formamid

Store Temp -20° C

Ship Temp Ambient

Description 5-Aminoimidazole-4-carboxamide-1-β-D-ribofuranoside (AICAR) is an activator of AMPK that also decreases mTORC1 signaling; it displays anticancer, antihypertensive, anti-diabetic, and anti-inflammatory activities. AICAR enhances the efficacy of rapamycin in several cancer cells and suppresses signaling by HER2 and EGFR2 in breast cancer cells. This compound also decreases mean arterial pressure in ApoE^{-/-} animal models and induces vasodilation in aortic rings. In animal models of insulin resistance, AICAR decreases hyperglycemia, lowers insulin levels, and improves insulin signaling. Additionally, AICAR inhibits LPS/D-Gal-induced upregulation of TNF-α, NO, and myeloperoxidase in animal models of hepatitis.



Bulk quantities available upon request

Product ID	Size
A3208	10 mg
A3208	50 mg
A3208	100 mg

References Mukhopadhyay S, Chatterjee A, Kogan D, et al. 5-Aminoimidazole-4-carboxamide-1-β-4-ribofuranoside (AICAR) enhances the efficacy of rapamycin in human cancer cells. *Cell Cycle*. 2015 Aug 31:0. [Epub ahead of print]. PMID: 26323019.

Greig FH, Ewart MA, McNaughton E, et al. The hypotensive effect of acute and chronic AMP-activated protein kinase activation in normal and hyperlipidemic mice. *Vascul Pharmacol*. 2015 Jul 18. [Epub ahead of print]. PMID: 26196300.

Niederberger E, King TS, Russe OQ, et al. Activation of AMPK and its Impact on Exercise Capacity. *Sports Med*. 2015 Jul 18. [Epub ahead of print]. PMID: 26186961.

Radika MK, Anuradha CV. Activation of insulin signaling and energy sensing network by AICAR, an AMPK activator in insulin resistant rat tissues. *J Basic Clin Physiol Pharmacol*. 2015 Jun 27. [Epub ahead of print]. PMID: 26124049.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.