

AICAR (CAS: 2627-69-2)

## Catalog #: EBC51013

<b>Biological Activity</b>	
Synonyms	AICA Riboside, Acadesine, AICAR, NSC105823
Chemical Name	5-Amino-1-[(2R,3S,4R,5R)-tetrahydro-3,4-dihydroxy-5-(hydroxymethyl)furan-2-yl]-1H- imidazole-4-carboxamide
Application	AICAR is an inhibitor of the transcription of PPARa, the coactivation of PPARa
CAS No.	2627-69-2
Purity	≥99.0%
Molecular Weight	258.23
Molecular Formula	$C_9H_{14}N_4O_5$
Shipping	Gel Pack
Storage	Store at -20° C
Target & IC <sub>50</sub>	AMPK, Autophagy

### **Molecular Structure**



#### **Solubility**

DMSO: 51 mg/mL (197.50 mM) Water: 20 mg/mL (77.45 mM) **PS:** < 1 mg/ml refers to the product insoluble

#### Description

AICAR is an adenosine analog that is phosphorylated in whole cells to form 5-aminoimidazole-4-carboxamide-1-Dribofuranosyl-5'-monophosphate (ZMP), which stimulates AMPK activity1. AICAR acts by entering nucleoside pools, significantly increasing levels of adenosine during periods of ATP breakdown. AICAR mimics the effects of insulin on the expression of two gluconeogenic genes PEPCK and glucose-6-phosphatase2. AICAR inhibits PPARa coactivation3 and adipocyte differentiation4. AICAR is a substrate for the AICAR transformylase activity of ATIC5. AICAR is also known as 5-amino-1- $\beta$ -D-ribofuranosyl-1H-imidazole-4-carboxamide, N1-( $\beta$ -D-Ribofuranosyl)-5-aminoimidazole-4carboxamide, and Acadesine.

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