Technical Data Sheet

# AICAR

Catalog Number :2626926

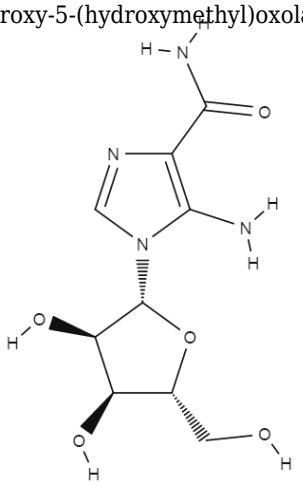
RUO: For Research Use Only. Not for use in diagnostic procedures.

## Product Information

**Synonyms:** Acadesine, AICA ribonucleoside, aminoimidazole carboxamide ribonucleoside,ARA100,1-ribosyl-4-carboxamido-5-aminoimidazole

**Chemical Name:** 5-amino-1-[(2R,3R,4S,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]imidazole-4-carboxamide

**Molecular Formula:** $C_9H_{14}N_4O_5$



**Molecular Weight:** 258.2

**CAS Number:** 2627-69-2

**Purity:** ≥98%

**Applications:** FA

**Formulation:** Crystalline solid

**Storage:** Product should be kept at -20°C.

## Description

AICAR is a cell-permeable adenosine analog that is a selective activator of AMP-activated protein kinase (AMPK) in adipocytes and hepatocytes. The AMPK is a metabolic regulator that inhibits anabolic processes and is active when energy availability is reduced. AICAR is reported to promote osteogenic differentiation of mesenchymal stem cells in vitro and astroglial differentiation in neural stem cells.

## Preparation & Storage

Soluble in organic solvents such as ethanol or DMSO.

## References


1.Sullivan, J. E., Brocklehurst, K. J., Marley, A. E., Carey, F., Carling, D., Beri, R. K. (1994). Inhibition of lipolysis and lipogenesis in isolated rat adipocytes with AICAR, a cell-permeable activator of AMP-activated protein kinase.;FEBS letters,;353(1), 33-36.

2. Young, M. E., Radda, G. K., Leighton, B. (1996). Activation of glycogen phosphorylase and glycogenolysis in rat skeletal muscle by AICAR—an activator of AMP-activated protein kinase.;FEBS letters,;382(1), 43-47.

3. Iglesias, M. A., Ye, J. M., Frangioudakis, G., Saha, A. K., Tomas, E., Ruderman, N. B., ... Kraegen, E. W. (2002). AICAR administration causes an apparent enhancement of muscle and liver insulin action in insulin-resistant high-fat-fed rats.;Diabetes,;51(10), 2886-2894.



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