

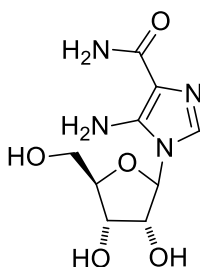
Catalog # 10-1092

AICAR

CAS# 2627-69-2

5-Aminoimidazole-4-carboxamide 1-β-D-ribofuranoside, Acadesine

Lot # X103138



Activates AMP-activated protein kinase (AMPK). Promotes ligand-independent activation of the insulin receptor.¹ Promotes skeletal muscle autophagy via activation of FoxO3a.² Controls smooth muscle cell hyperproliferation in vascular disease.³ Induces osteogenic differentiation in mesenchymal stem cells.⁴ Inhibits proinflammatory response in glial cells.⁵ Cell permeable.

- 1) Chopra et al. (2012), *Phosphorylation of the insulin receptor by AMP-activated protein kinase (AMPK) promotes ligand-independent activation of the insulin signalling pathway in rodent muscle*; Diabetologia, **55** 783
- 2) Sanchez et al. (2012), *AMPK promotes skeletal muscle autophagy through activation of forkhead FoxO3a and interaction with Ulk1*; J. Cell Biochem., **113** 695
- 3) Ferri et al. (2012), *AMP-activated protein kinase and the control of smooth muscle cell hyperproliferation in vascular disease*; Vascul. Pharmacol., **56** 9
- 4) Wu et al. (2011) *AICAR, a small chemical molecule, primes osteogenic differentiation of adult mesenchymal stem cells*; Int. J. Artif. Organs, **34** 1128
- 5) Giri et al. (2004) *5-aminoimidazole-4-carboxamide-1-beta-4-ribofuranoside inhibits proinflammatory response in glial cells: a possible role of AMP-activated protein kinase*; J. Neurosci., **24** 479

PHYSICAL DATA

Molecular Weight:	258.24
Molecular Formula:	C ₉ H ₁₄ N ₄ O ₅
Purity:	>99% by TLC
	NMR (Conforms)
Solubility:	DMSO (up to 15 mg/ml) or water (up to 15 mg/ml)
Physical Description:	Off-white solid (MP = 213-214°C)
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Protect from exposure to moisture. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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