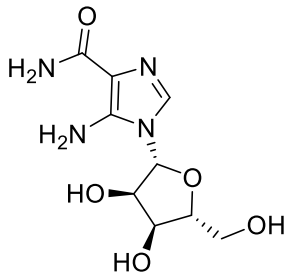
bioaustralis
fine chemicals

PRODUCT DATA SHEET

Acadesine

Code No.: **BIA-A2589**

Pack sizes: **5 mg, 25 mg**



Synonyms : 5-Aminoimidazole-4-carboxamide 1-β-D-ribofuranoside, AIC-Riboside, AICA-Riboside, AICAr, Acadra, Arasine, GP 1-110, NSC 105823

Specifications

CAS #	:	**2627-69-2**
Molecular Formula	:	**$C_9H_{14}N_4O_5$**
Molecular Weight	:	**258.23**
Source	:	**Synthetic**
Appearance	:	**White solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Sluble in water and DMSO**

Application Notes

Acadesine was originally identified as a metabolite of Bacillus species and was shown to accumulate in the culture medium of E. coli under sulphonamide stasis. Acadesine is an adenosine-regulating agent that increases bioavailability of adenosine. Ithas been tested clinically as a cardioprotectant and for hematologic malignancies. Acadesine activates AMP-activated protein kinase and inhibits platelet aggregation, induces p53-dependendent apoptosis in B cells and regulates cellular uptake of glucose, beta-oxidation of fatty acids, protein synthesis, and the biogenesis of GLUT4 and mitochondria.

References

1. 5(4)-Amino-4(5)imidazolecarboxamide, a precursor of purines. Shive W. et al. J Am Chem Soc. 1947, 69, 725.
2. Acadesine: the prototype adenosine regulating agent for reducing myocardial ischaemic injury. Mullane K. Cardiovascular Res. 1993, 27, 43.
3. AICAR antiproliferativepropertiesinvolve the AMPK-independent activation of the tumor suppressors LATS 1 and 2. Chloe P. et al. Neoplasia 2018, 20, 555.
4. Acadesine, an adenosine-regulating agent with the potential for widespread indications. Drew B.G. and Kingwell B.A. Expert Opin Pharmacother. 2008, 9, 2137.

Updated: 11 June 2021

Building C, 28-54 Percival Road, Smithfield, NSW 2164, AUSTRALIA

Tel: 61 2 9757 4515 Fax: 61 2 9757 2586 Web: www.bioaustralis.com Email: info@bioaustralis.com