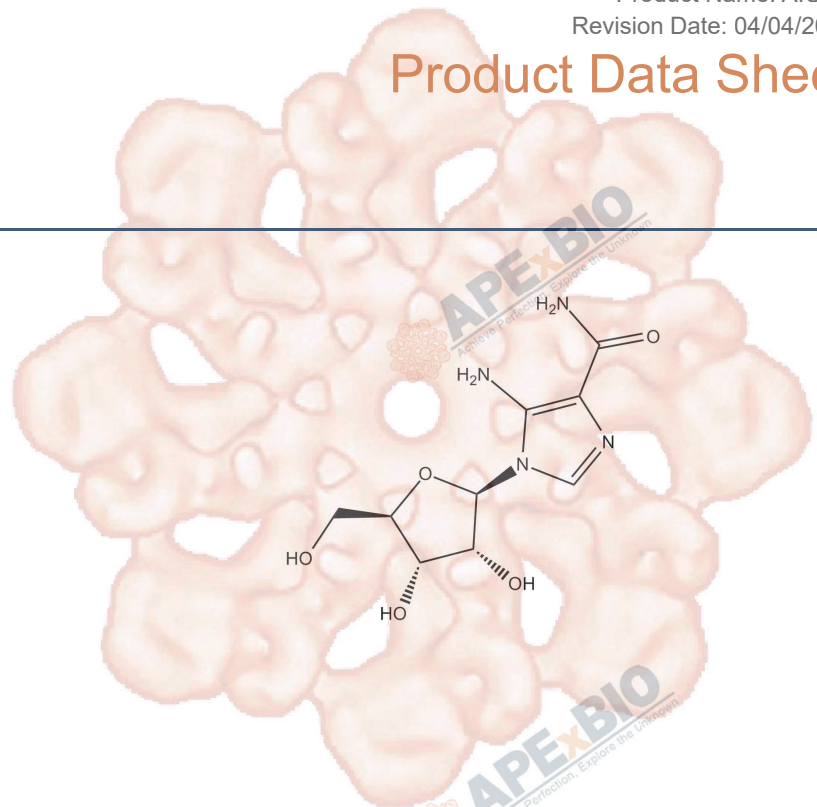


Product Data Sheet

AICAR

Cat. No.:	A8184
CAS No.:	2627-69-2
Formula:	C ₉ H ₁₄ N ₄ O ₅
M.Wt:	258.23
Synonyms:	GP 1-110
Target:	PI3K/Akt/mTOR Signaling
Pathway:	AMPK
Storage:	Store at -20°C



Solvent & Solubility

≥ 12.9 mg/mL in DMSO, ≥ 52.9 mg/mL in H₂O, insoluble in EtOH

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		1 mM	3.8725 mL	19.3626 mL	38.7252 mL
		5 mM	0.7745 mL	3.8725 mL	7.7450 mL
		10 mM	0.3873 mL	1.9363 mL	3.8725 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	AMPK activator	
IC ₅₀ & Target		
In Vitro	Cell Viability Assay	
	Cell Line:	Rat primary astrocytes, microglia and peritoneal macrophages
	Preparation method:	The solubility of this compound in DMSO is limited. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.
	Reacting conditions:	0.01 ~ 1 mM; 2 hrs
	Applications:	In rat primary astrocytes, microglia and peritoneal macrophages, AICAR

	does-dependently inhibited the LPS-induced production of TNF α , IL-1 β and IL-6.	
In Vivo	Animal experiment	
	Animal models:	LPS-injected rats
	Dosage form:	100 mg/kg; i.p.
	Applications:	In LPS-injected rats, AICAR abolished LPS-mediated increased levels of IL-1 β and IFN- γ in serum.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Wei Q, Zhang B, et al. "Maslinic Acid Inhibits Colon Tumorigenesis by the AMPK-mTOR Signaling Pathway." J Agric Food Chem. 2019 Apr 17;67(15):4259-4272.PMID:30913881
2. Chen X, Han Y, et al. "Disulfide-bond A oxidoreductase-like protein protects against ectopic fat deposition and lipid-related kidney damage in diabetic nephropathy." Kidney Int. 2019 Feb 12.pii: S0085-2538(18)30899-8.PMID:30791996
3. Xu N, Wang Q, et al. "Fenofibrate improves vascular endothelial function and contractility in diabetic mice." Redox Biol. 2018 Oct 1;20:87-97.PMID:30296701

See more customer validations on www.apexbt.com.

References

- [1]. Giri S, Nath N, Smith B et al. 5-aminoimidazole-4-carboxamide-1-beta-4-ribofuranoside inhibits proinflammatory response in glial cells: a possible role of AMP-activated protein kinase. J Neurosci. 2004 Jan 14;24(2):479-87.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



APEX BIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

