

Product datasheet

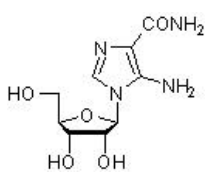
AICAR (Acadesine/AICA riboside) ab120358

4 References 1 Image

Overview

Product name	AICAR (Acadesine/AICA riboside)
Description	Cell-permeable activator of AMP-activated protein kinase
Biological description	Cell-permeable activator of AMP-activated protein kinase. Is taken up into cells by adenosine transporters and phosphorylated by adenosine kinase to the active nucleotide ZMP (5-aminoimidazole-4-carboxamide ribonucleoside), which mimics effects of AMP on the AMPK system. Active <i>in vivo</i> and <i>in vitro</i> . Also available in simple stock solutions (ab146713) - add 1 ml of water to get an exact, ready-to-use concentration.
Purity	> 98%

Properties

Chemical name	5-Amino-1-[(2R,3S,4R,5R)-tetrahydro-3,4-dihydroxy-5-(hydroxymethyl)furan-2-yl]-1H-imidazole-4-carboxamide
Molecular weight	258.23
Chemical structure	
Molecular formula	C ₉ H ₁₄ N ₄ O ₅
CAS Number	2627-69-2
PubChem identifier	17513
Storage instructions	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in water to 50 mM and in DMSO to 100 mM (with heating)
Handling	Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour. Need more advice on solubility, usage and handling? Please visit our frequently asked questions

(FAQ) page for more details.

SMILES

NC(=O)c2ncn([C@@H]1O[C@H](CO)[C@H](O)[C@@H]1O)c2N

Source

Synthetic

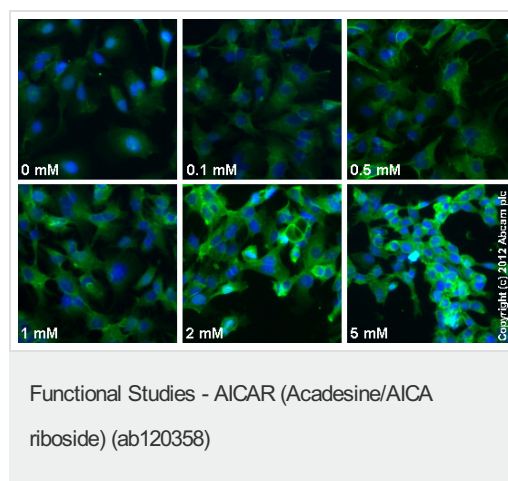
Applications

Our [Abpromise guarantee](#) covers the use of **ab120358** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

Images



[ab39400](#) staining AMPK alpha 1 (phospho S496) in HepG2 cells treated with AICAR (ab120358), by ICC/IF. Increase in AMPK alpha 1 (phospho S496) expression correlates with increased concentration of AICAR, as described in literature.

The cells were incubated at 37°C for 1h in media containing different concentrations of ab120358 (AICAR) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with [ab39400](#) (5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-rabbit polyclonal antibody ([ab96899](#)) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE, NOT FOR USE IN HUMANS"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery

- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <http://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors
- Abcam biochemicals are novel compounds and we have not tested their biological activity in house. Please use the literature to identify how to use these products effectively. If you require further assistance please contact the scientific support team