



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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## AICAR

Autophagy inducer  
Catalog No. SIH-402



Discovery through partnership | Excellence through quality

### Overview

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#### Product Name

AICAR

#### Description

Autophagy inducer

#### Purity

>99% (TLC), NMR conforms

#### CAS No.

2627-69-2

#### Molecular Formula

CH<sub>11</sub>N<sub>10</sub>O<sub>1</sub>

#### Molecular Weight

258.2

### Properties

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#### Storage Temperature

-20°C

#### Shipping Temperature

Shipped Ambient

#### Product Type

Inducer

#### Solubility

Soluble to 75 mM in water and to 75 mM in DMSO.

#### Source

Synthetic

#### Appearance

Off-white solid.

#### SMILES

[C@@H]2([N]1C(=C(C(N)=O)N=C1)N)O[C@H](CO)[C@H]([C@H]2O)O

#### InChi

InChi=1S/C9H14N4O5/c10-7-4(8(11)17)12-2-13(7)9-6(16)5(15)3(1-14)18-9/h2-3,5-6,9,14-16H,1,10H2,(H2,11,17)/t3-,5-,6-,9-/m1/s1

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## InChIKey

RTRQQBHATOEIAF-UUOKFMHZSA-N

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## Safety Phrases

Classification: D2B- Toxic Material Causing Other Toxic Effects, Moderate skin irritant, Moderate respiratory irritant, Moderate eye irritant

Safety Phrases:

S22 - Do not breathe dust.

S24/25 - Avoid contact with skin and eyes.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Hazard statements:

H315- Causes skin irritation.

H319- Causes serious eye irritation.

H335- May cause respiratory irritation.

Precautionary statements:

P261- Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264- Wash skin thoroughly after handling.

P271- Use only outdoors or in a well-ventilated area.

P280- Wear protective gloves/ eye protection/ face protection.

P302 + P352- IF ON SKIN: Wash with plenty of soap and water.

P304 + P340- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312- Call a POISON CENTER or doctor/ physician if you feel unwell.

P321- Specific treatment (see supplemental first aid instructions on this label).

P332 + P313- If skin irritation occurs: Get medical advice/ attention.

P337 + P313- If eye irritation persists: Get medical advice/ attention.

P362- Take off contaminated clothing and wash before reuse.

P403 + P233- Store in a well-ventilated place. Keep container tightly closed.

P405- Store locked up.

P501- Dispose of contents/ container to an approved waste disposal plant.

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## Cite This Product

AICAR (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SIH-402)

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## Biological Description

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### Alternative Names

N1-(?-D-Ribofuranosyl)-5-aminoimidazole-4-carboxamide

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### Research Areas

Cancer, Autophagy

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### PubChem ID

17513

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### Scientific Background

AICAR is an adenosine analog that when phosphorylated forms 5-aminoimidazole-4-carboxamide-1-D-ribofuranosyl-5-monophosphate (ZMP) which proceeds to activate adenosine monophosphate-activated protein kinase (AMPK). This process in turn stimulates glucose uptake by skeletal muscle in an insulin-dependent manner. Autophagy is initiated by the UNC-51-like kinase 1/2 complex (ULK1 and ULK2). Under basal conditions, autophagy is negatively regulated due to the phosphorylation of ULK1 at serine-757 by mTORC1. During starvation, autophagy is positively regulated by ULK1/2 when it is phosphorylated at serine-555 and serine-777 by AMPK. Therefore, the activation of AMPK by AICAR, in turn will induce autophagy.

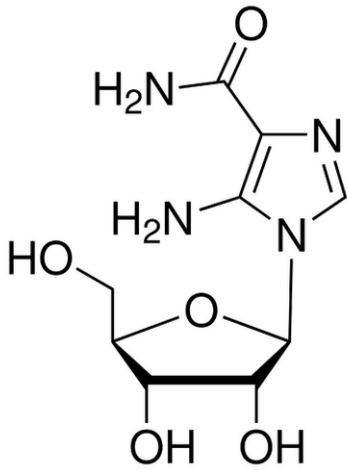
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### References

1. Jhun B.S., et al. (2004) Biochem Biophys Res Commun. 318(2): 372-80.

## Product Images

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Chemical structure of AICAR (SIH-402), a Autophagy inducer. CAS #: 2627-69-2 .  
Molecular Formula: C<sub>9</sub>H<sub>14</sub>N<sub>4</sub>O<sub>5</sub>. Molecular Weight: 258.2 g/mol.

## Product Citations (0)

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Currently there are no citations for this product.

## Reviews

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There are no reviews yet.