



# 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

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

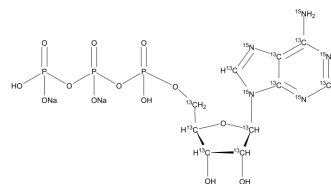
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## ATP-<sup>13</sup>C<sub>10</sub>,<sup>15</sup>N<sub>5</sub> disodium

Cat. No.:	HY-B2176S1
Molecular Formula:	<sup>13</sup> C <sub>10</sub> H <sub>14</sub> <sup>15</sup> N <sub>5</sub> Na <sub>2</sub> O <sub>13</sub> P <sub>3</sub>
Molecular Weight:	566.04
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Solution, -20°C, 2 years



### BIOLOGICAL ACTIVITY

<b>Description</b>	ATP- <sup>13</sup> C <sub>10</sub> , <sup>15</sup> N <sub>5</sub> (disodium) is a <sup>13</sup> C-labeled and <sup>15</sup> N-labeled <a href="#">ATP</a> (HY-B2176). ATP is a central component of energy storage and metabolism in vivo. ATP provides the metabolic energy to drive metabolic pumps and serves as a coenzyme in cells. ATP is an important endogenous signaling molecule in immunity and inflammation[1][2][3][4].								
<b>In Vitro</b>	<p>ATP-<sup>13</sup>C<sub>10</sub>,<sup>15</sup>N<sub>5</sub> (Adenosine 5'-triphosphate-<sup>13</sup>C<sub>10</sub>,<sup>15</sup>N<sub>5</sub>; 5 mM; 1 hour) disodium co-treatment with LPS (1 µg/mL) has a synergistic effect on the activation of the NLRP3 inflammasome in HGFs<sup>[3]</sup>.</p> <p>ATP-<sup>13</sup>C<sub>10</sub>,<sup>15</sup>N<sub>5</sub> (2 mM; 0.5-24 hours) disodium induces secretion of IL-1β, KC and MIP-2 from BMDMs in a caspase-1 activation-dependent manner<sup>[4]</sup>.</p> <p>ATP-<sup>13</sup>C<sub>10</sub>,<sup>15</sup>N<sub>5</sub> disodium promotes neutrophil chemotaxis in vitro<sup>[4]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
<b>In Vivo</b>	<p>ATP-<sup>13</sup>C<sub>10</sub>,<sup>15</sup>N<sub>5</sub> (Adenosine 5'-triphosphate-<sup>13</sup>C<sub>10</sub>,<sup>15</sup>N<sub>5</sub>; 50 mg/kg; i.p.) disodium protects mice against bacterial infection in vivo<sup>[4]</sup>.</p> <p>ATP-<sup>13</sup>C<sub>10</sub>,<sup>15</sup>N<sub>5</sub> disodium induces the secretion of IL-1β, KC and MIP-2 and neutrophils recruitment in vivo<sup>[4]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>Four-week-old Kunming mice (18-22 g)<sup>[4]</sup></td> </tr> <tr> <td>Dosage:</td> <td>50 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection, before bacterial (E. coli) challenge</td> </tr> <tr> <td>Result:</td> <td>Protected mice from bacterial infection.</td> </tr> </table>	Animal Model:	Four-week-old Kunming mice (18-22 g) <sup>[4]</sup>	Dosage:	50 mg/kg	Administration:	Intraperitoneal injection, before bacterial (E. coli) challenge	Result:	Protected mice from bacterial infection.
Animal Model:	Four-week-old Kunming mice (18-22 g) <sup>[4]</sup>								
Dosage:	50 mg/kg								
Administration:	Intraperitoneal injection, before bacterial (E. coli) challenge								
Result:	Protected mice from bacterial infection.								

### REFERENCES

- [1]. Swennen EL, et al. Immunoregulatory effects of adenosine 5'-triphosphate on cytokine release from stimulated whole blood. *Eur J Immunol.* 2005 Mar;35(3):852-8.
- [2]. M J L Bours, et al. Adenosine 5'-triphosphate and adenosine as endogenous signaling molecules in immunity and inflammation. *Pharmacol Ther.* 2006 Nov;112(2):358-404.
- [3]. Shuo Xu, et al. Doxycycline inhibits NACT Leucine-rich repeat Protein 3 inflammasome activation and interleukin-1β production induced by Porphyromonas gingivalis-lipopolysaccharide and adenosine triphosphate in human gingival fibroblasts. *Arch Oral Biol.* 2019 Nov;107:104514.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA