



# 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) 

# PRODUCT INFORMATION



## Autotaxin (human, recombinant)

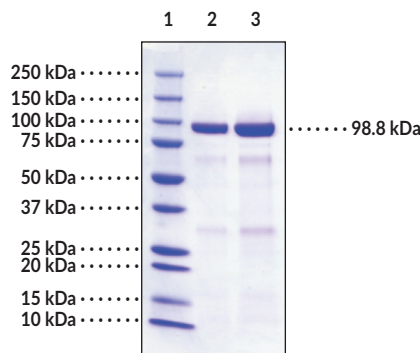
Item No. 10803

### Overview and Properties

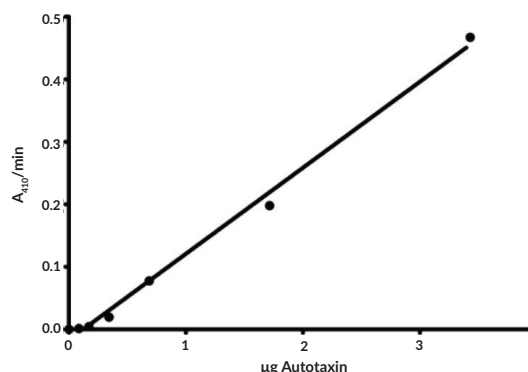
<b>Synonyms:</b>	ATX, Ectonucleotide Pyrophosphatase/Phosphodiesterase-2, ENPP-2, Lyso-PLD, Lysophospholipase D
<b>Source:</b>	Active recombinant human autotaxin expressed in insect cells
<b>Amino Acids:</b>	36-863
<b>Uniprot No.:</b>	Q13822-1
<b>Molecular Weight:</b>	98.8 kDa
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥2 years
<b>Purity:</b>	≥90% estimated by SDS-PAGE
<b>Supplied in:</b>	50 mM Tris-HCl, pH 8.0, with 150 mM sodium chloride and 20% glycerol
<b>Protein Concentration:</b>	<i>batch specific</i> mg/ml
<b>Activity:</b>	<i>batch specific</i> U/ml
<b>Specific Activity:</b>	<i>batch specific</i> U/mg
<b>Unit Definition:</b>	One unit is defined as the amount of enzyme required to produce 1 μmol of <i>p</i> -nitrophenol per minute at 37°C in 50 mM Tris-HCl, pH 9.0, containing <i>bis</i> -nitrophenol phosphate.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Images



Lane 1: MW Markers  
Lane 2: Autotaxin (2 μg)  
Lane 3: Autotaxin (4 μg)



Autotaxin activity is determined by measuring hydrolysis of *bis*-nitrophenol phosphate. Production of *p*-nitrophenol is measured by monitoring the increase in absorbance at 410 nm.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/06/2024

**CAYMAN CHEMICAL**  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## Description

Autotaxin, also known as ectonucleotide pyrophosphatase/phosphodiesterase 2 (ENPP2), is a secreted lysophospholipase D (lysoPLD) that hydrolyzes lysophosphatidylcholine (LPC) to lysophosphatidic acid (LPA), which has roles in cell proliferation, survival, and migration.<sup>1</sup> It is synthesized as a zymogen and is composed of a N-terminal signal peptide, which is cleaved during maturation, two somatomedin B-like domains, a phosphodiesterase (PDE) catalytic domain, and a C-terminal nuclease-like domain.<sup>2,3</sup> It is constitutively active and inhibited by LPA in a negative feedback loop.<sup>4,5</sup> Autotaxin is secreted primarily by adipose tissue and endothelial cells and has been found in numerous biological fluids, including the blood, cerebrospinal fluid, and saliva. It is overexpressed in a variety of cancers, including glioblastoma multiforme, melanoma, and hepatocarcinoma.<sup>4-6</sup> Autotaxin has roles in cell motility, immune regulation, and embryogenesis.<sup>4,5</sup> Knockout of *Enpp2* is embryonic lethal in mice.<sup>4</sup> Autotaxin activity is increased in the serum of patients with a variety of conditions, including rheumatoid arthritis, chronic hepatitis C, or cholestasis, and serum autotaxin levels are increased in patients with asthma, acute respiratory distress syndrome (ARDS), or coronavirus disease 2019 (COVID-19).<sup>3,7</sup> Formulations containing autotaxin inhibitors have been used in clinical trials for the treatment of various diseases, including idiopathic pulmonary fibrosis (IPF), metabolic disorders, and cancer.<sup>7</sup> Cayman's Autotaxin (human, recombinant) protein can be used for enzyme activity assays.

## References

1. Nishimasu, H., Okudaira, S., Hama, K., *et al.* Crystal structure of autotaxin and insight into GPCR activation by lipid mediators. *Nat. Struct. Mol. Biol.* **18**(2), 205-12 (2011).
2. Jansen, S., Stefan, C., Creemers, J.W.M., *et al.* Proteolytic maturation and activation of autotaxin (NPP2), a secreted metastasis-enhancing lysophospholipase D. *J. Cell Sci.* **118**(14), 3081-9 (2011).
3. Magkrioti, C., Galaris, A., Kanellopoulou, P., *et al.* Autotaxin and chronic inflammatory diseases. *J. Autoimmun.* **104**, 102327 (2019).
4. Jankowski, M. Autotaxin: Its role in biology of melanoma cells and as a pharmacological target. *Enzyme Res.* 194857 (2011).
5. Zhang, X., Li, M., Yin, N., *et al.* The expression regulation and biological function of autotaxin. *Cells* **10**(4), 939 (2021).
6. Ramesh, S., Govindarajulu, M., Suppiramaniam, V., *et al.* Autotaxin-lysophosphatidic acid signaling in Alzheimer's disease. *Int. J. Mol. Sci.* **19**(7), 1827 (2018).
7. Ntatsoulis, K., Karampitsakos, T., Tsitoura, E., *et al.* Commonalities between ARDS, pulmonary fibrosis and COVID-19: The potential of autotaxin as a therapeutic target. *Front. Immunol.* **12**, 687397 (2021).

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM