

# Autotaxin (E-12): sc-374222

## BACKGROUND

Autotaxin (ATX), also designated ectonucleotide pyrophosphatase/phosphodiesterase 2 (E-NPP 2), is a membrane-bound glycoprotein that cleaves diester bonds for a broad range of substrates. Originally isolated from the human melanoma cell line (A2058), Autotaxin is predominantly expressed in brain, placenta, ovary and small intestine. Autotaxin has significant homology to the cell membrane differentiation antigen PC-1, and is a stimulator of tumor cell motility. It also functions as a catalyst by hydrolytically removing 5'-nucleotides from the 3'-hydroxy termini of 3'-hydroxy-terminated oligonucleotides.

## CHROMOSOMAL LOCATION

Genetic locus: ENPP2 (human) mapping to 8q24.12; Enpp2 (mouse) mapping to 15 D1.

## SOURCE

Autotaxin (E-12) is a mouse monoclonal antibody raised against amino acids 541-720 mapping within a C-terminal extracellular domain of Autotaxin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Autotaxin (E-12) is available conjugated to agarose (sc-374222 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374222 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374222 PE), fluorescein (sc-374222 FITC), Alexa Fluor® 488 (sc-374222 AF488), Alexa Fluor® 546 (sc-374222 AF546), Alexa Fluor® 594 (sc-374222 AF594) or Alexa Fluor® 647 (sc-374222 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374222 AF680) or Alexa Fluor® 790 (sc-374222 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Autotaxin (E-12) is recommended for detection of Autotaxin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Autotaxin siRNA (h): sc-44906, Autotaxin siRNA (m): sc-44907, Autotaxin shRNA Plasmid (h): sc-44906-SH, Autotaxin shRNA Plasmid (m): sc-44907-SH, Autotaxin shRNA (h) Lentiviral Particles: sc-44906-V and Autotaxin shRNA (m) Lentiviral Particles: sc-44907-V.

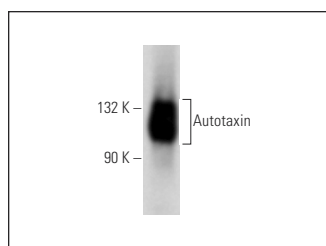
Molecular Weight of Autotaxin: 125 kDa.

Positive Controls: human ovary extract: sc-363769 or human brain extract: sc-364375.

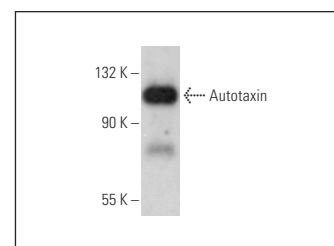
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Autotaxin (E-12): sc-374222. Western blot analysis of Autotaxin expression in human ovary tissue extract.



Autotaxin (E-12): sc-374222. Western blot analysis of Autotaxin expression in human brain tissue extract.

## SELECT PRODUCT CITATIONS

- Zhang, G., et al. 2018. ATX-LPA axis facilitates estrogen-induced endometrial cancer cell proliferation via MAPK/ERK signaling pathway. *Mol. Med. Rep.* 17: 4245-4252.
- Onallah, H., et al. 2018. Activity and clinical relevance of Autotaxin and lysophosphatidic acid pathways in high-grade serous carcinoma. *Virchows Arch.* 473: 463-470.
- Valdés-Rives, S.A., et al. 2019. LPA<sub>1</sub> receptor activation induces PKC $\alpha$  nuclear translocation in glioblastoma cells. *Int. J. Biochem. Cell Biol.* 110: 91-102.
- Miao, Y., et al. 2021. NSUN2 regulates aneurysm formation by promoting Autotaxin expression and T cell recruitment. *Cell. Mol. Life Sci.* 78: 1709-1727.
- Litchfield, M., et al. 2021. Positron emission tomography imaging of Autotaxin in thyroid and breast cancer models using [<sup>18</sup>F]PRIMATX. *Mol. Pharm.* 18: 3352-3364.
- Joshi, L., et al. 2021. Inhibition of Autotaxin and lysophosphatidic acid receptor 5 attenuates neuroinflammation in LPS-activated BV-2 microglia and a mouse endotoxemia model. *Int. J. Mol. Sci.* 22: 8519.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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