


## Product datasheet

### Anti-ENPP2/ATX antibody [1F8] ab77104

KO VALIDATED

[10 References](#) [4 Images](#)

#### Overview

Product name	Anti-ENPP2/ATX antibody [1F8]
Description	Mouse monoclonal [1F8] to ENPP2/ATX
Host species	Mouse
Tested applications	<b>Suitable for:</b> IHC-P, WB <b>Unsuitable for:</b> ICC
Species reactivity	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse 
Immunogen	Recombinant full length protein corresponding to Human ENPP2/ATX.
Positive control	WB: HEK293 whole cell lysate and in the following human tissue lysates: kidney; placenta; ovary; small intestine. IHC: human tonsil paraffin sections.
General notes	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a>.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Purity	Protein G purified

<b>Clonality</b>	Monoclonal
<b>Clone number</b>	1F8
<b>Isotype</b>	IgG1

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab77104 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

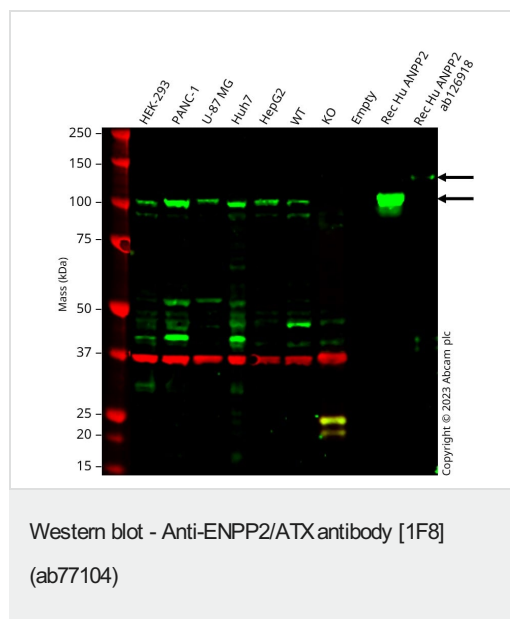
Application	Abreviews	Notes
<b>IHC-P</b>		Use a concentration of 1 µg/ml.
<b>WB</b>		Use a concentration of 1 µg/ml. Detects a band of approximately 100 kDa (predicted molecular weight: 99 kDa).

**Application notes** Is unsuitable for ICC.

## Target

<b>Function</b>	Hydrolyzes lysophospholipids to produce lysophosphatidic acid (LPA) in extracellular fluids. Major substrate is lysophosphatidylcholine. Also can act on sphingosylphosphorylcholine producing sphingosine-1-phosphate, a modulator of cell motility. Can hydrolyze, in vitro, bis-pNPP, to some extent pNP-TMP, and barely ATP. Involved in several motility-related processes such as angiogenesis and neurite outgrowth. Acts as an angiogenic factor by stimulating migration of smooth muscle cells and microtubule formation. Stimulates migration of melanoma cells, probably via a pertussis toxin-sensitive G protein. May have a role in induction of parturition. Possible involvement in cell proliferation and adipose tissue development. Tumor cell motility-stimulating factor.
<b>Tissue specificity</b>	Predominantly expressed in brain, placenta, ovary, and small intestine. Expressed in a number of carcinomas such as hepatocellular and prostate carcinoma, neuroblastoma and non-small-cell lung cancer. Expressed in body fluids such as plasma, cerebral spinal fluid (CSF), saliva, follicular and amniotic fluids. Not detected in leukocytes. Isoform 1 is more highly expressed in peripheral tissues than in the central nervous system (CNS). Adipocytes only express isoform 1. Isoform 3 is more highly expressed in the brain than in peripheral tissues.
<b>Sequence similarities</b>	Belongs to the nucleotide pyrophosphatase/phosphodiesterase family. Contains 2 SMB (somatomedin-B) domains.
<b>Post-translational modifications</b>	N-glycosylation, but not furin-cleavage, plays a critical role on secretion and on lysoPLD activity.
<b>Cellular localization</b>	Secreted. Secreted by most body fluids including serum and CSF. Also by adipocytes and numerous cancer cells.

## Images



**All lanes :** Anti-ENPP2/ATX antibody [1F8] (ab77104) at 1/1000 dilution

**Lane 1 :** HEK-293 cell lysate at 20 µg

**Lane 2 :** PANC-1 cell lysate at 20 µg

**Lane 3 :** U-87 MG cell lysate at 20 µg

**Lane 4 :** Huh7 cell lysate at 20 µg

**Lane 5 :** HepG2 cell lysate at 20 µg

**Lane 6 :** Wild Type HeLa cell lysate at 20 µg

**Lane 7 :** ENPP2 knockout HeLa cell lysate at 20 µg

**Lane 8 :** Empty cell lysate at 0 µg

**Lane 9 :** Recombinant Human ENPP-2/Autotaxin Protein, CF cell lysate at 0.5 µg

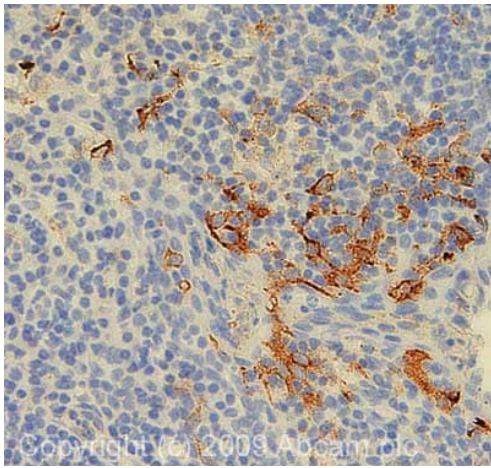
**Lane 10 :** Recombinant Human ENPP2/ATX Protein **ab126918** cell lysate at 0.5 µg

Performed under reducing conditions.

**Predicted band size:** 99 kDa

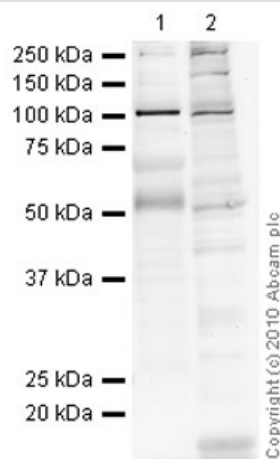
**Observed band size:** 105 kDa

Anti-ENPP2 antibody [1F8] (ab77104) staining at 1/1000 dilution, shown in green; Rabbit Anti-GAPDH antibody [EPR16891] (**ab181602**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab77104 was shown to bind specifically to ENPP2. A band was observed at 105 kDa in wild-type HEK-293 cell lysates with no signal observed at this size in ENPP2 knockout cell line. To generate this image, wild-type and ENPP2 knockout HEK-293 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween<sup>®</sup> 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse IgG H&L 800CW and Goat anti-Rabbit IgG H&L 680RD at 1/20000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ENPP2/ATX antibody [1F8] (ab77104)

IHC image of ENPP2/ATX staining in Human Tonsil FFPE section, performed on a Bond<sup>TM</sup> system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab77104, 1 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX



Western blot - Anti-ENPP2/ATX antibody [1F8] (ab77104)

**All lanes :** Anti-ENPP2/ATX antibody [1F8] (ab77104) at 10 µg/ml

**Lane 1 :** Human kidney tissue lysate - total protein (**ab30203**)

**Lane 2 :** HEK293 (Human embryonic kidney cell line) Whole Cell Lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

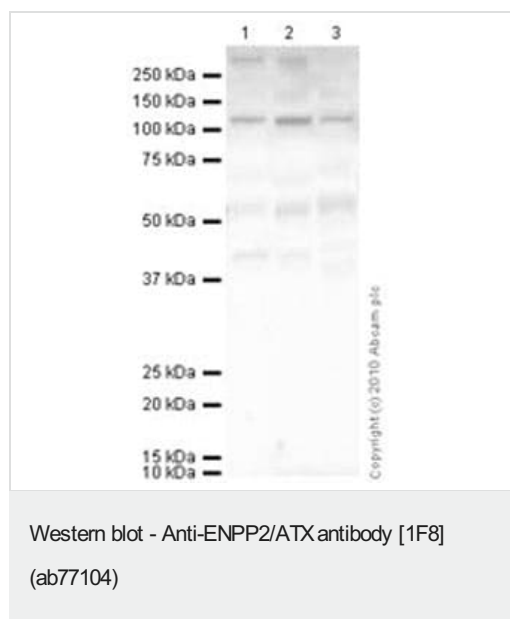
Performed under reducing conditions.

**Predicted band size:** 99 kDa

**Observed band size:** 100 kDa

**Additional bands at:** 180 kDa, 250 kDa, 50 kDa, 65 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 20 minutes



**All lanes :** Anti-ENPP2/ATX antibody [1F8] (ab77104) at 10 µg/ml

**Lane 1 :** Human placenta tissue lysate - total protein ([ab29745](#))

**Lane 2 :** Human ovary tissue lysate - total protein ([ab30222](#))

**Lane 3 :** Human small intestine tissue lysate - total protein ([ab29276](#))

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 99 kDa

**Observed band size:** 110 kDa

**Additional bands at:** 300 kDa, 40 kDa, 55 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 20 minutes

ENPP2/ATX contains three potential glycosylation sites (SwissProt), which might explain its migration at a higher molecular weight than predicted.

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