

41771. Human Autotaxin (ATX/ENPP2)

Origin:	Recombinant	Cat. No.:	41771
Tag:	C-terminal 6xHis	Size:	0.1 mg
Source:	HEK293	Purity:	>90%
Other Names:	ATX, ENPP2	Species:	Human

Introduction to the Molecule

Autotaxin (ATX, ENPP2) is a secreted glycoprotein with phosphodiesterase (PDE) activity. It is one of the member in the nucleotide pyrophosphatase/phosphodiesterase family (NPPs) family.

ATX has lysophospholipase D activity that converts lysophosphatidylcholine into LPA, and it was originally identified as a tumor cell-motility-stimulating factor. LPA, which specifically binds to G protein-coupled receptors (GPCR), plays a wide range of biological activities, including cell hyperproliferation, which may contribute to oncogenesis and metastasis. ATX has been to be overexpressed in many tumor cells, and thus plays an important role in tumor development and metastasis. In addition, ATX also plays an important role in nervous and immune systems.

Description

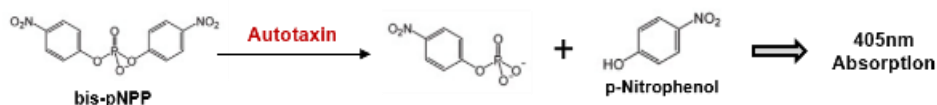
Expressed in HEK293 cells with total 872 AA. Mw: 100.2 KDa (calculated). C-terminal 6xHis-tag, 9 extra AA (highlighted). Recombinant protein for research use or manufacturing only.

Amino Acid Sequence

MARRSSFQSCQIISLFTFAVGVNCLGFTAHRICKRAEGWEEGPPTVLSDSPWTNISGCKGRCFEL
 QEAGPPDCRCDNLCKSYTSCCHDFDELCLKTARGWECTKDRCGEVRNEENACHCSEDCLARGD
 CCTNYQVVCKGESHVWDDDCIEEIKAAECPAGFVRPPLIIFSVDGFRASYMCKGSKVMPNIEKLR
 SCGTHSPYMRPVYPTKTFPNLYTLATGLYPESHGIVGNSMYDPVFDA TFHLRGREKFNHRWWG
 GQPLWITATKQGVKAGTFFWSVVIPHERIL TILQWL TLPDHERPSVYAFYSEQPDFSGHKYGP
 GPEMTNPLREIDKIVGQLMDGLKQLKLRHRCVNVIFVGDHGMEDVTCDRTEFLSNYLTNVDDITL
 VPGTLGRIRSKFSNNAKYDPKAIANLTCKKPDQHFKPYLKQHLPKRLHYANNRRIEDIHLLVER
 RWHVARKPLDVYKKPSGKCFQGDHGFNDKVNMQTVFVGYGSTFKYKTKVPPFENIELYNV
 MCDLLGLKPAPNGTHGSLNHLRLTNTFRPTMPEEVTRPNYPGIMYLQSDFDLGTCDKVEPK
 NKLDELNKRLLHTKSTEERHLLYGRPAVLYRTRYDILYHTDFESGYSEIFLMPLWTSYTVSKQAE
 VSSVPDHLTSCVRPDVRVSPSFSQNCLAYKNDKQMSYGFLFPPYLSSEAKYDAFLVTNMVPM
 YPAFKRVWNYFQRLVKKYASERNGVNVISGPIFYDYDGLHDTEDKIKQYVEGSSIPVPTHYY
 SIITSCLDFTQPADKCDGPLSVSSFILPHRPDNEESCNSSEDESKWVEELMKMHTARVRDIEHLTS
 LDFFRKTSRSYPEILTLKTYLHTYESEIS**YHHHHHHH**

Endotoxin Level

<0.01 EU per 1 µg of the protein by the LAL method.

Bioactivity Test


Measured by enzymatic ability to cleave Bis (p- Nitrophenyl) Phosphate (BPNPP).

The specific activity of human ATX is > 30,000 pmol/min/μg.

Specific Activity (pmol/min/μg) = Adjusted V_{max}^ (OD/min) x Conversion Factor (pmol/OD)/Amount of Enzyme (μg)

*See protocol of activity assay on www.immunodiagnosics.com.hk.

Formulation

Lyophilized at 1 mg/mL in storage buffer (10mM Na₂HPO₄, 2 mM KH₂PO₄, 300-500mM NaCl, 2.7 mM KCl, PH7.4).

Reconstitution

Add deionized water to prepare a working stock solution of approximately 1 mg/mL and let the lyophilized pellet dissolve completely.

Storage

Store lyophilized protein at -20°C. Aliquot reconstituted protein and store at -80°C. Avoid repeated freezing /thawing cycles.

Quality Control Test

BCA to determine quantity of the protein. SDS PAGE to determine purity of the protein.

SDS-PAGE Gel

