

42771. Mouse Autotaxin (ATX/ENPP2)

Origin:	Recombinant	Cat. No.:	42771
Tag:	C-terminal 6xHis	Size:	0.1 mg
Source:	HEK293	Purity:	>90%
Other Names:	ATX, ENPP2	Species:	Mouse

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

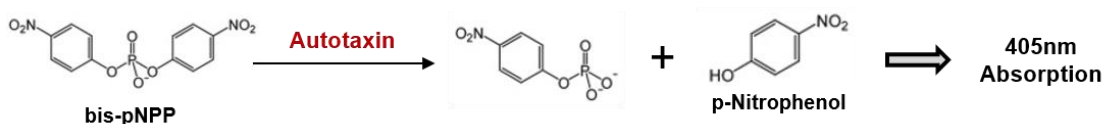
Expressed in HEK293 cells with total 871 AA. Mw: 100.1 KDa (calculated). C-terminal 6xHis-tag, 9 extra AA (highlighted). Recombinant protein for research use or manufacturing only.

Amino Acid Sequence

MARQGCFGSYQVISLFTFAIGVNLCLGFTASRIKRAEWDEGPPTVLSDSPWTNTSGSCKGRFCFELQEV
 GPPDCRCDNLCKSYSSCCHDFDELCLKTARGWECTKDRCGEVRNEENACHCEDCLSRGDCCTNYQ
 VVCKGESHVWDDDCEEIRVPECPAGFVRPLIIFSVDGFRASYMKKGSKVMNIEKLRSCGTHAPYMR
 PVYPTKTFPNLYTLATGLYPESHGIVGNSMYDPVFDATFHLRGREKFNHRWWGGQPLWITATKQGV
 RAGTFFWSVSIPIHERRILTILQWLSLPDNERPSVYAFYSEQPDFSGHKYGPFGPEMTNPLREIDKTVGQ
 LMDGLKQLKLRHRCVNVIVFGDHGMEDVTCDRTEFLSNYLTVNDDITLVPGLTGRIRPKIPNNLKYDP
 KAIIANLTCKKPDQHFKPYMKQHLPKRLHYANNRRIEDLHLLVERRWHVARKPLDVYKKPSGKCFQ
 GDHGFNDKVNMQTVFVGYGPTFKYRTKVPPFENIELYNVMCDLLGLKPAPNNGTHGSLNHLRTN
 TFRPTLPPEEVSRLNYPGIMYLQSDFDLGTCTDDKVEPKNKLEELNKRLHTKGSTEEHLLYGRPAVLY
 RTSYDILYHTDFESGYSEIFLMPLWTSYTISKQAEVSSIPEHLTNCVRPDVVRVSPGFSQNCLAYKNDKQ
 MSYGFLFPYLSSSPEAKYDAFLVTNMVPMYPAFKRVWTFYQFQVVKKYASERNGVNVISGPIFDYN
 YNGLRDIEDEIKQYVEGSSIPVPTHYYSIITSCLDFTQPADKCDGPLSVSSFILPHRPDNDSCNSSEDES
 KWVEELMKMHTARVRDIEHLTGLDFYRKTSRSYSEILTKTYLHTYESEISYYHHHHHH

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 mouse ATX is > 5,000 pmol/min/μg

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

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

