

Human Autotaxin (ATX)

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 908 AA. Mw: 104.37 KDa (calculated). C-terminal 6xHis-tag, 9 extra AA (highlighted).

Recombinant protein for research use or manufacturing only.

Amino Acid Sequence

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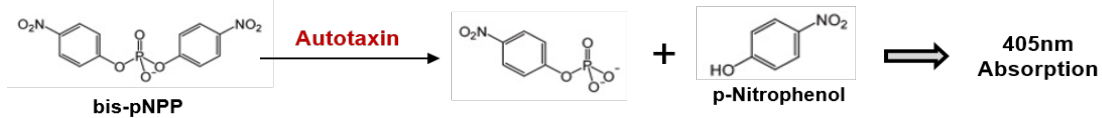
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CKGRFCFELQE AGPPDCRC DN LCKSYTSCCH DFDELCLKTA RGWECTKDCR GEVRNEENAC
HCSEDCLARG DCCTNYQVVC KGESHVWDDD CEEIKAAECP AGFVRPPLII FSVGDGFRASY
METKKGSKVM ETPNIEKLRS CGTHSPYMET RPVYPTKTFP NLYTLATGLY PESHGIVGNS
METYDPVFDA TFHLRGREKF NHRWWGGQPL WITATKQGVK AGTFFWSVVI PHERRILTIL
QWLTLPDHER PSVYAFYSEQ PDFSGHKYGP FGPEMETTNP LREIDKIVGQ LMETDGLKQL
KLHRCVNVIF VGDHGMETED VTCDRTEFLS NYLTNVDDIT LVPGTLGRIR SKFSNNAKYD
PKAIIANLTC KKPQDHFQPY LKQHLPKRLH YANNRRIEDI HLLVERRRWHV ARKPLDVYKK
PSGKCFQGD HGFDNKVNSM ETQTVFVGYG STFQYKTKVP PFENIELYNV METCDLLGLK
PAPNNGTHGS LNHLRTNTF RPTMETPEEV TRPNYPGIME TYLQSDFDLG CTCDDKVEPK
NKLDELNKR LHTKGSTEERH LLYGRPAVLY RTRYDILYHT DFESGYSEIF LMETPLWTSY
TVSKQAEVSS VPDHLTSCVR PDVRVSPSFS QNCLAYKNDK QMETSYGFLF PPYLSSSPEA
KYDAFLVTNM ETVPMETYP A FKRVMNYFQR VLVKKYASER NGVNVISGPI FDYDYGDLHD
TEDKIKQYVE GSSIPVPTHY YSIITSCLDF TQPADKCDGP LSVSSFILPH RPDNEESCNS
SEDESKWVEE LMETKMETH T ARVRDIEHLT SLDFFRKTSR SYPEILTLKT YLHTYESEIS
YYHHHHHH

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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

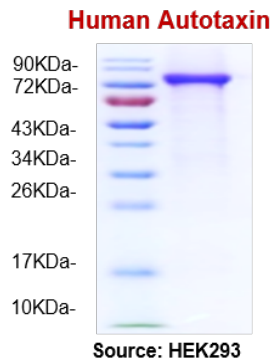
Store lyophilized protein at -20°C. Aliquot reconstituted protein and store at -80°C. Avoid repeated freezing /thawing cycles.

Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

SDS-PAGE Gel



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