



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human ATIA Protein
Catalog Number: hRP-1787
Manufacturer: LD Biopharma, Inc.

Introduction

The regulation of apoptosis is critical for controlling tissue homeostasis and preventing tumor formation and growth. Reactive Oxygen Species (ROS) generation plays a key role in such regulation. Human ATIA (anti-TNF α -induced apoptosis) protects cells against TNF α and Hypoxia-induced apoptosis. ATIA gene is highly expressed in some tissues including liver, lung, heart, and testis. The human ortholog of ATIA, vasorin, was reported to be a potential inhibitor of TGF β signaling with a possible role in angiogenesis. Recent data indicated that ATIA is highly expressed in human glioblastoma, and ATIA knockdown in glioblastoma cells renders them sensitive to hypoxia-induced apoptosis.

Full-length extracellular domain of human ATIA cDNA (24 – 575aa, derived from BC068575) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein was expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: ATIA (VASN, vasorin)
Accession Number: NP_612449.2
Species: Human
Size: 50 μ g / Vial
Composition: 0.50 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 7 days.



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Key References

Anning Lin, *ATIA: A link between inflammation and hypoxia*. Mol Cell. 42(5): 557-558 (2011).

Swati Choksi, et al., *A HIF-1 target, Protects cells from Apoptosis by Modulating the Mitochondrial Thioredoxin, TRX2*. Mol Cell.42(5): 597-609 (2011).

Ikedo Y, et al., *Vasorin, a transforming growth factor beta-binding protein expressed in vascular smooth muscle cells, modulates the arterial response to injury in vivo*. Proc. Natl. Acad. Sci. U.S.A. 101 (29), 10732-10737 (2004)

Applications

1. May be used for in vitro ATIA mediated TGF β pathway regulation study for normal or cancer cells with recombinant ATIA protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction mapping.
3. Potential diagnostic/therapeutic target for glioblastoma and other tumors.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFCPSGCQCSQPQTVFCTARQGTTPRDVPPDTVGLY
VFENGITMLDAGSFAGLPGLQLLDLSQNQIASLPSGVFQPLANLSNLDLTANRLHEITNETFRG
LRRLERLYLGKNRIRHIQPGAFDTLDRLLELKLQDNELRALPPLRLPRLLLLDLSHNSLLALEP
GILDANVEALRLAGLGLQQLDEGLFSRLRNLHDLVDVSDNQLERVPPVIRGLRGLTRRLLAGNT
RIAQLRPEDLAGLAALQELDVSNLSLQALPGDLSGLFPRLRLAAARNPFNCVCPLSWFGPWVR
ESHVTLASPEETRCHFPKPNAGRLLLELDYADFGCPATTTTATVPTTRPVVREPTALSSSLAPT
WLSPTTEPATEAPSPSTAPPTVGPVQPQDCPPSTCLNGGTCHLGTRHHLACLCEGFTGLYCE
SQMGQGTRPSPTPVTPRPPRSLTLGIEPVSPSTSLRVGLQRYLQSSVQLRSLRLTYRNLSGPK
RLVTLRLPASLAEYTVTQLRPNATYSVCMPLGPGRVPEGEEACGEAHTPPAVHSNHAPVTQAR
EGNLP