



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human APG5L Protein
Catalog Number: hRP-0762
Manufacturer: LD Biopharma, Inc.

Introduction

Autophagy is an evolutionarily conserved mechanism that plays important roles in both cell death and cell survival. Human ATG5 autophagy related 5 homolog (*S. cerevisiae*) (ATG5L) is an essential constituent for autophagosome formation, which sequesters cytoplasmic materials before lysosomal delivery. Studying ATG5L function / regulation is very important for both cell death and survival in cancer development.

Full-length human APG5L (275 aa) gene was constructed with 17aa N-terminal T7 tag and expressed in *E. coli* as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: APG5L (APG5; ASP; hAPG5; APG5-like)
Accession Number: NP_004840
Species: Human
Size: 50 µg / Vial
Composition: 1.0 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 30 days.

Key References

Lepine, S., et al., *Autophagy induced by deficiency of sphingosine-1-phosphate phosphohydrolase 1 is switched to apoptosis by calpain-mediated autophagy-related gene 5 (Atg5) cleavage*. J. Biol. Chem. 286 (52), 44380-44390 (2011)

Kim, M.S., et al., *Expressional and mutational analyses of ATG5 gene in prostate cancers*. APMIS 119 (11), 802-807 (2011)



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Lee, M.S., et al., *Shiga toxins induce autophagy leading to differential signaling pathways in toxin-sensitive and toxin-resistant human cells*. Cell. Microbiol. 13 (10), 1479-1496 (2011)

Applications

1. May be used for in vitro autophagy / apoptosis regulation study with intracellular protein delivery of this protein.
2. As soluble/native protein, may be used as enzymatic substrate protein for ubiquitin assay.
3. May be used for mapping protein-protein interaction assay.
4. May be used as antigen for specific antibody development and cancer diagnostic development.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGEFGSMTDDKDVLRDVWFGRIPTCFTLYQDEITEREAEPYLLLPVSYLTL
VTDKVKKHFQKVMRQEDISEIWF EYEGTPLKWHYP IGLLFDLLASSALPWNITVHFKSFPEKD
LLHCPSKDAIEAHFMSCMKEADALKHKSQVINEMQKKDHLQWGLQNDRFDQFWAINRKLMEY
PAEENGFRIYIPFRIYQTTTERPFIQKLF RPVAADGQLHTLGDLLKEVCPSAIDPEDGEKKNQVM
IHGIEPMLETPLQWLSEHLSYPDNFLHISIIIPQPTD