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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human KLHL12 Protein
Catalog Number: hRP-0824
Manufacturer: LD Biopharma, Inc.

Introduction

Human Kelch-like protein 12 (KLHL12) belongs to BTB domain protein family, and several members of the large family of BTB proteins can function as adaptors in Cul3-based E3 ubiquitin ligases. Recent data indicated that KLHL12 functions as an adaptor in a Clu3-based E3 ligase complex, and this protein specific interacts with dopamine D4 receptor for ubiquitination and negatively regulates the Wnt-b-catenin pathway through interaction with Dsh protein.

Full-length human KLHL12 (568 aa) gene was constructed with 15 aa N-terminal T7 tag and 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: KLHL12 (C3P1; DKLR; hDKLR)
Accession Number: NP_067646
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, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Angers,S., et al., *The KLHL12-Cullin-3 ubiquitin ligase negatively regulates the Wnt-beta-catenin pathway by targeting Dishevelled for degradation.* Nat. Cell Biol. 8 (4), 348-357 (2006)

Rondou,P., et al., *BTB Protein KLHL12 targets the dopamine D4 receptor for ubiquitination by a Cul3-based E3 ligase.* J. Biol. Chem. 283 (17), 11083-11096 (2008)



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Applications

1. May be used for in vitro Wnt pathway and dopamine receptor degradation regulation study with intracellular delivery of this protein.
2. As soluble / native protein, may be used as enzymatic substrate protein for kinase and ubiquitin assay development.
3. May be used for mapping KLHL12 protein-protein interaction.
4. May be used as antigen for specific antibody development.

Quality Control

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

Recombinant Protein Sequence

MASMTGGQQMGRGEFMGGIMAPKDIMTNTHAKSILNSMNSLRKSNTLCDVTLRVEQKDFPAHRI
VLAACSDYFCAMFTSELSEKPKPYVDIQGLTASTMEILLDFVYTETVHVTVENVQELLPAACLL
QLKGVKQACCEFLESQLDPSNCLGIRDFAETHNCVDLMQAAEVFSQKHFPEVVQHEEFILLSQG
EVEKLIKDEIQVDSEEPVFEAVINWVKHAKKEREESLPNLLQYVRMPLLTTPRYITDVIDAEPF
IRCSLQCRDLVDEAKKFHLRPELRSQMGPRTARLGANEVLLVVGGFSGSQSPIDVVEKYDPK
TQEWSFLPSITRKRRYVASVSLHDRIYVIGGYDGRSRLSSVECLDYTADEDGVWYSVAPMNVRR
GLAGATTLGDMIYVSGGFDGSRRHSMERYDPNIDQWSMLGDMQTAREGAGLVVASGVIYCLGG
YDGLNILNSVEKYDPHTGHWTNVTPMATKRSGAGVALLNDHIYVVGGFDTAHLSSVEAYNIRT
DSWTTVTSMTPRCYVGATVLRGRLYAIAGYDGNLSLLSSIECYDPIIDSWEVVTSMTGTQRCDAG
VCVLREK