



LD Biopharma, Inc.
7384 Trade Street, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human PDCD6 Protein
Catalog Number: hRP-1932
Manufacturer: LD Biopharma, Inc.

Introduction

This gene encodes a calcium-binding protein belonging to the penta-EF-hand protein family. Calcium binding is important for homodimerization and for conformational changes required for binding to other protein partners. This gene product participates in T cell receptor-, Fas-, and glucocorticoid-induced programmed cell death. It may mediate Ca^{2+} -regulated signals along the death pathway. Calcium-dependent adapter is necessary for the association between PDCD6IP and TSG101. PDCD6 interaction with DAPK1 can accelerate apoptotic cell death by increasing caspase-3 activity. It may inhibit KDR/VEGFR2-dependent angiogenesis; the function involves inhibition of VEGF-induced phosphorylation of the Akt signaling pathway. PDCD6 seems to play a role in the regulation of the distribution and function of MCOLN1 in the endosomal pathway.

Full-length human PDCD6 cDNA (190 aa, Isoform-I) was constructed with N-terminal codon optimization gene synthesis 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: PDCD6 (ALG-2; PEF1B)
Accession Number: NP_037364
Species: Human
Size: 50 µg / Vial
Composition: 0.5 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



LD Biopharma, Inc.
7384 Trade Street, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

Zhou B, et al., *Prognostic value of PDCD6 polymorphisms and the susceptibility to bladder cancer*. *Tumour Biol.* 35 (8), 7547-7554 (2014)

Sasaki-Osugi K, et al., *Nuclear ALG-2 protein interacts with Ca²⁺ homeostasis endoplasmic reticulum protein (CHERP) Ca²⁺-dependently and participates in regulation of alternative splicing of inositol trisphosphate receptor type 1 (IP3R1) pre-mRNA*. *J. Biol. Chem.* 288 (46), 33361-33375 (2013)

Okumura M, et al., *VPS37 isoforms differentially modulate the ternary complex formation of ALIX, ALG-2, and ESCRT-I*. *Biosci. Biotechnol. Biochem.* 77 (8), 1715-1721 (2013)

Okumura M, et al., *Mammalian ESCRT-III-related protein IST1 has a distinctive met-pro repeat sequence that is essential for interaction with ALG-2 in the presence of Ca²⁺*. *Biosci. Biotechnol. Biochem.* 77 (5), 1049-1054 (2013)

Applications

1. May be used for in vitro PDCD6 mediated Ca²⁺-regulated signals related cell death pathway regulation study in various cells by intracellular delivery of this protein using ProFectin reagent.
2. May be used for protein-protein interaction assay.
3. Potential biomarker protein for tumor treatment / prognosis.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGFEAAYSYPGPGAGPGPAAGAALPDQSFLWNVFRVD
KDRSGVISDTELQQALSNGTWTPTFNPVTVRSIIISMFDRENKAGVNFSEFTGVWKYITDWQNVFR
TYDRDNSGMIDKNEKQALSGFGYRLSDQFHDILIRKFDROGRGQIAFDDFIQGCIVLQRLTDI
FRRYDTDQDGWIQVSYEQYLSMVFSIV