



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human PPIA Protein
Catalog Number: hRP-1579
Manufacturer: LD Biopharma, Inc.

Introduction

Human peptidyl-prolyl cis-trans isomerase A (PPIA) gene encodes a member of the peptidyl-prolyl cis-trans isomerase (PPIase) family. PPIases catalyze the cis-trans isomerization of proline imidic peptide bonds in oligopeptides and accelerate the folding of proteins. The encoded protein is a cyclosporin binding-protein and may play a role in cyclosporine A-mediated immunosuppression. The protein can also interact with several HIV proteins, including p55 gag, Vpr, and capsid protein, and has been shown to be necessary for the formation of infectious HIV virions.

Full-length human PPIA (164aa, derived from BC073992) gene was constructed with 29 aa N-terminal T7 / His / TEV cleavage site 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: PPIA (CYPA; CYPH; HEL-S-69p)
Accession Number: NP_066953.1
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, 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

Liu Z, et al., *The interferon-inducible MxB protein inhibits HIV-1 infection*. Cell Host Microbe 14 (4), 398-410 (2013)

Chen S, et al., *Structure-based identification of small molecule compounds targeting cell*



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cyclophilin A with anti-HIV-1 activity. Eur. J. Pharmacol. 565 (1-3), 54-59 (2007)

Piotukh K, et al., *Cyclophilin A binds to linear peptide motifs containing a consensus that is present in many human proteins.* J. Biol. Chem. 280 (25), 23668-23674 (2005)

Braaten D, et al., *The hydrophobic pocket of cyclophilin is the binding site for the human immunodeficiency virus type 1 Gag polyprotein.* J. Virol. 71 (3), 2107-2113 (1997)

Applications

1. May be used as auto-antibodies detection reagent, which will react with sera of some auto-immuno-diseases patients.
2. May be used for in vitro PPIA mediated immunophilins pathways' regulation study for controlling immune-reaction study by intracellularly delivery this protein with "ProFectin" reagent.
3. May be used for PPIA protein-protein interaction assay.
4. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
5. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFVNPTVFFDIAVDGEPLGRVVSFELFADKVPKTAENF
RALSTGEKGFYKGSFCFHRIIPGFMCQGGDFTRHNGTGGKSIYGEKFEDENFILKHTGPGILSM
ANAGPNTNGSQFFICTAKTEWLDGKHVVFGKVKEGMNIVEAMERFGSRNGKTSKKITTIADCGQL
E