



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 PCDH19 Protein
Catalog Number: HRP-3408
Manufacturer: LD Biopharma, Inc. USA

Introduction

Human protocadherin-19 (PCDH19) gene encodes a cell-membrane protein which is potential calcium-dependent cell-adhesion protein. Recent data indicated that dysfunction of PCDH19 cause trouble when mossy fibers of the brain are forming synapses. Although PCDH19 locus was on X chromosome, mutations in the PCDH19 gene cause cognitive impairment, affecting females more than males.

Full-length extracellular domain of human PCDH19 cDNA (26 – 678aa, Isoform-I) was constructed with codon optimization gene synthesis and expressed with a human alpha Fetal Protein N-terminal (AFPn) -His-TEV cleavage site Tag (217aa) fusion at its N-terminal 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: PCDH19 (KIAA1313)
Accession Number: NP_001171809
Species: Human
Size: 75 µg / Vial
Composition: 1.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Naosuke Hoshina, et al. *Female-specific synaptic dysfunction and cognitive impairment in a mouse model of PCDH19 disorder*. Science. Vol 372, Issue 6539, eaaz 3893. (2021)



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

Applications

1. May be used for in vitro PCDH19 mediated neuronal cell differentiation (synapses formation) regulation study in vitro for various cells with this recombinant PCDH19 protein either as soluble factor or as coating matrix protein.
2. May be used for PCDH19 protein-protein interaction assay.
3. As native human PCDH19 antigen for specific antibody production.

Quality Control

Purity: > 92 % by SDS-PAGE.

Recombinant Human **AFP_n**- PCDH19 Fusion Protein Sequence (94.4 kD)

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQSSGCL
NQLPAFLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVTSCAYEEDRET
MNKFIYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVTKELRESSGGS
LNLKYSV
EEEQRAGTVIANVAKDAREAGFALDPRQASAFRVVSNAPHLVDINPSSGLLVTKQKIDRDLLCRQSPKC
IISLEVMSSSMEICVIKVEIKDLNDNAPSFPAAQIELEISEAASPGTRIPLDSAYDPDSGSFGVQTYELT
PNELFGLEIKTRGDGSRFAELVVEKSLDRETQSHYSFRITALDGGDPPRLGTVGLSIKVTDSNDNNPVFS
ESTYAVSVPENSPNTPVIRLNASDPDEGTNGQVVYSFYGYVNDRTRELFQIDPHSGLVTVTGDALDYEEG
HVEYLDVQAKDLGPNSIPAHCKVTVSVLDTNDNPPVINLLSVNSELVEVSESAPPGYVIALVRVSDRDSG
LNGRVQCRLGNVPPFRLQEYESFSTILVDGRLDREQHDQYNLTIQARDGGVPMQLQSAKSFTVLTIDENDN
HPHF_{SK}PKYYQVIVQENNTPGAYLLSVSARDPDLGLNGSVSYQIVPSQVRDMPVFTYVSINPNSGDIYALR
SFNHEQTKAFEFKVLAKDGGLPSLQSNATVRVILLDVNDNTPVITAPPLINGTAEVYIPRNSGIGYLVTV
VKAEDYDEGENGRVTYDMTEGDRGFFEIDQVNGEVRTTRTFGESSKSSYELIVVAHDHGKTSLSASALVL
IYLSPALDAQESMGSVNLS