

PDCL3 (J-16): sc-100806

BACKGROUND

PDCL3 (phosducin-like 3), also known as VIAF1 (viral IAP-associated factor 1), VIAF, PHLP3 or HTPHLP, is a widely expressed protein that belongs to the phosducin-like family of proteins. Members of this family contain a conserved C-terminus and were initially thought function as modulators of heterotrimeric G proteins that specifically bound to the $\beta\gamma$ subunits of G proteins, thereby neutralizing the subunit and inhibiting G protein-mediated signal transduction. It is now believed that the majority of phosducin-like family members associate with the cytosolic chaperonin complex (CCT) and regulate the folding of proteins. Localizing to the cytoplasm, PDCL3 does not appear to play a role in G protein signaling, but participates in the chaperone-assisted folding of proteins, such as β Tubulin and Actin, that are involved in the regulation of cell cycle progression. More specifically, PDCL3, when associated with CCT, represses the ATPase activity of CCT and ultimately disrupts the folding of the Actin or tubulin substrates.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 6116787. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Blaauw, M., et al. 2003. Phosducin-like proteins in *Dictyostelium discoideum*: implications for the phosducin family of proteins. EMBO J. 22: 5047-5057.
3. Wilkinson, J.C., et al. 2004. VIAF, a conserved inhibitor of apoptosis (IAP)-interacting factor that modulates caspase activation. J. Biol. Chem. 279: 51091-51099.
4. Jacob, J., et al. 2004. The C-terminal domain of viral IAP associated factor (cVIAF) is a structural homologue of phosducin: resonance assignments and secondary structure of the C-terminal domain of VIAF. J. Biomol. NMR 28: 197-198.
5. Stirling, P.C., et al. 2006. PhLP3 modulates CCT-mediated Actin and tubulin folding via ternary complexes with substrates. J. Biol. Chem. 281: 7012-7021.
6. Matuzany-Ruban, A., et al. 2006. Phosducin-like protein levels in leukocytes of patients with major depression and in rat cortex: the effect of chronic treatment with antidepressants. Psychiatry Res. 141: 287-294.

CHROMOSOMAL LOCATION

Genetic locus: PDCL3 (human) mapping to 2q11.2.

SOURCE

PDCL3 (J-16) is a mouse monoclonal antibody raised against recombinant PDCL3 of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PDCL3 (J-16) is recommended for detection of PDCL3 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000).

Suitable for use as control antibody for PDCL3 siRNA (h): sc-94814, PDCL3 shRNA Plasmid (h): sc-94814-SH and PDCL3 shRNA (h) Lentiviral Particles: sc-94814-V.

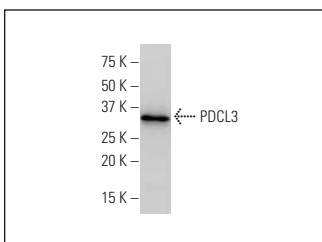
Molecular Weight of PDCL3: 27 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PDCL3 (J-16): sc-100806. Western blot analysis of PDCL3 expression in Jurkat whole cell lysate.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.