

PhLP (23): sc-293029

BACKGROUND

Phosducin-like protein (PhLP, PDCL) is an ethanol-responsive modulator of heterotrimeric G proteins. The protein shares extensive amino acid sequence homology with phosducin (Phd), a phosphoprotein expressed in retina and pineal gland. Both PhLP and Phd regulate G protein signaling by binding to the $\beta\gamma$ subunits of G proteins. PhLP interacts with $G_{\beta\gamma}$ via a short C-terminal binding site. Additionally, PhLP acts as a substrate for GRK 2 phosphorylation at the same C-terminal binding site between residues 195 and 218. PhLPs may participate directly in the regulation of calcium-evoked exocytosis in adrenal medullary chromaffin cells. Glycosylated PhLP regulates opioid receptor function in mouse brain.

REFERENCES

- Miles, M.F., et al. 1993. Phosducin-like protein: an ethanol-responsive potential modulator of guanine nucleotide-binding protein function. *Proc. Natl. Acad. Sci. USA* 90: 10831-10835.
- Schroder, S., et al. 1997. Identification of a C-terminal binding site for G protein $\beta\gamma$ subunits in phosducin-like protein. *FEBS Lett.* 401: 243-246.
- Thibault, C., et al. 1999. Cloning and characterization of the rat and human phosducin-like protein genes: structure, expression and chromosomal localization. *Biochim. Biophys. Acta* 1444: 346-354.
- Ruiz-Gomez, A., et al. 2000. Phosphorylation of phosducin and phosducin-like protein by G protein-coupled receptor kinase 2. *J. Biol. Chem.* 275: 29724-29730.
- Gensse, M., et al. 2000. Regulation of exocytosis in chromaffin cells by phosducin-like protein, a protein interacting with G protein $\beta\gamma$ subunits. *FEBS Lett.* 480: 184-188.
- Garzon, J., et al 2002. Glycosylated phosducin-like protein long regulates opioid receptor function in mouse brain. *Neuropharmacology* 42: 813-828.
- LocusLink Report (LocusID: 5082). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: PDCL (human) mapping to 9q33.2; Pdcl (mouse) mapping to 2 B.

SOURCE

PhLP (23) is a mouse monoclonal antibody raised against amino acids 17-133 of the short isoform of PhLP of rat origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PhLP (23) is available conjugated to agarose (sc-293029 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-293029 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-293029 PE), fluorescein (sc-293029 FITC), Alexa Fluor[®] 488 (sc-293029 AF488), Alexa Fluor[®] 594 (sc-293029 AF594) or Alexa Fluor[®] 647 (sc-293029 AF647), 200 μ g/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-293029 AF680) or Alexa Fluor[®] 790 (sc-293029 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PhLP (23) is recommended for detection of short and long forms of PhLP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for PhLP siRNA (h): sc-45420, PhLP siRNA (m): sc-45421, PhLP shRNA Plasmid (h): sc-45420-SH, PhLP shRNA Plasmid (m): sc-45421-SH, PhLP shRNA (h) Lentiviral Particles: sc-45420-V and PhLP shRNA (m) Lentiviral Particles: sc-45421-V.

Molecular Weight of PhLP short isoform: 29 kDa.

Molecular Weight of PhLP long isoform: 37 kDa.

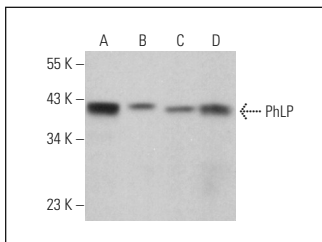
Molecular Weight of PhLP glycosylated isoforms: 45-50/100/150 kDa.

Positive Controls: PhLP (h4): 293T Lysate: sc-158847, RPE-J cell lysate: sc-24771 or Jurkat whole cell lysate: sc-2204.

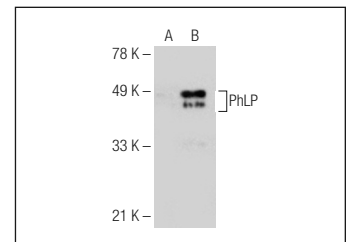
RECOMMENDED SUPPORT REAGENTS

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



PhLP (23): sc-293029. Western blot analysis of PhLP expression in RPE-J (A), 3T3-L1 (B) and Jurkat (C) whole cell lysates and rat brain tissue extract (D). Detection reagent used: m-IgG κ BP-HRP: sc-516102.



PhLP (23): sc-293029. Western blot analysis of PhLP expression in non-transfected: sc-117752 (A) and human PhLP transfected: sc-158847 (B) 293T whole cell lysates.

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. Not for resale.

PROTOCOLS

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

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