

# PhLP (H-110): sc-98255

## 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 GRK2 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., Barhite, S., Sganga, M. and Elliott, M. 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., Bluml, K., Dees, C. and Lohse, M.J. 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., Feng Wang, J., Charnas, R., Mirel, D., Barhite, S. and Miles, M.F. 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., Humrich, J., Murga, C., Quitterer, U., Lohse, M.J. and Mayor, F., Jr. 2000. Phosphorylation of phosducin and phosducin-like protein by G protein-coupled receptor kinase 2. *J. Biol. Chem.* 275: 29724-29730.
- Gensse, M., Vitale, N., Chasserot-Golaz, S. and Bader, M.F. 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., Rodriguez-Diaz, M., Lopez-Fando, A., Garcia-Espana, A. and Sanchez-Blazquez, P. 2002. Glycosylated phosducin-like protein long regulates opioid receptor function in mouse brain. *Neuropharmacology* 42: 813-828.

## CHROMOSOMAL LOCATION

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

## SOURCE

PhLP (H-110) is a rabbit polyclonal antibody raised against amino acids 66-175 mapping within an internal region of PhLP of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

PhLP (H-110) is recommended for detection of PhLP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PhLP (H-110) is also recommended for detection of PhLP in additional species, including equine, canine, bovine and porcine.

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.

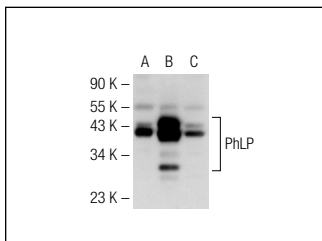
Molecular Weight of glycosylated PhLP long isoform: 45-50/100/150 kDa.

Positive Controls: PhLP (h2): 293T Lysate: sc-159877 or HeLa whole cell lysate: sc-2200.

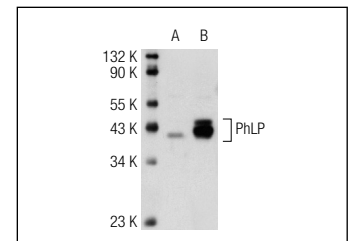
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PhLP (H-110): sc-98255. Western blot analysis of PhLP expression in non-transfected 293T: sc-117752 (A), human PhLP transfected 293T: sc-159877 (B) and HeLa (C) whole cell lysates.



PhLP (H-110): sc-98255. Western blot analysis of PhLP expression in non-transfected: sc-117752 (A) and human PhLP transfected: sc-170409 (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.