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PDCL3 Antibody

Catalog # ASC11821

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9H2J4
Other Accession	NP_076970, 13129044
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	27614
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PDCL3 antibody can be used for detection of PDCL by Western blot at 1 - 2 g/ml. Antibody can also be used for Immunohistochemistry at 5 g/mL. For Immunoflorescence start at 20 g/mL.

Additional Information

Gene ID	79031
Other Names	Phosducin-like protein 3, HTPHLP, PhPL3, Viral IAP-associated factor 1, VIAF-1, PDCL3, PhLP2A, VIAF1
Target/Specificity	PDCL3; PDCL3 antibody is human, mouse and rat reactive. PDCL3 antibody is predicted to not cross-react with other members of the PDCL protein family.
Reconstitution & Storage	PDCL3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	PDCL3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDCL3
Synonyms	PhLP2A, VIAF1
Function	Acts as a chaperone for the angiogenic VEGF receptor KDR/VEGFR2, increasing its abundance by inhibiting its ubiquitination and degradation (PubMed:23792958, PubMed:26059764). Inhibits the folding activity of the chaperonin-containing T-complex (CCT) which leads to inhibition of cytoskeletal actin folding (PubMed:17429077). Acts as a chaperone during heat shock alongside HSP90 and HSP40/70 chaperone complexes (By similarity). Modulates the activation of caspases during apoptosis (PubMed:15371430).

Cellular Location	Cytoplasm. Cytoplasm, perinuclear region. Endoplasmic reticulum
Tissue Location	Expressed in endothelial cells (at protein level) (PubMed:26059764). Expressed in all tissues examined including spleen, thymus, prostate, testis, ovary, small intestine and colon (PubMed:15371430).

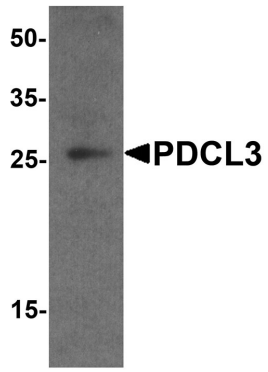
Background

Phosducin-like proteins (PhLPs) are a conserved family of proteins with thioredoxin-like domains that were initially identified as modulators of G protein signaling (1,2). PDCL3 is highly homologous to PDCL and shares an N-terminal helix domain and a C-terminal thioredoxin-fold (Trx-fold) domain (3). Along with the related protein PDCL2, PDCL3 interacts with the chaperonin CCT and modulates CCT-mediated actin and tubulin folding (4). Modulation of PDCL3 levels by MAPK phosphorylation and RhoA-dependent changes also promote cytoskeletal remodeling (5).

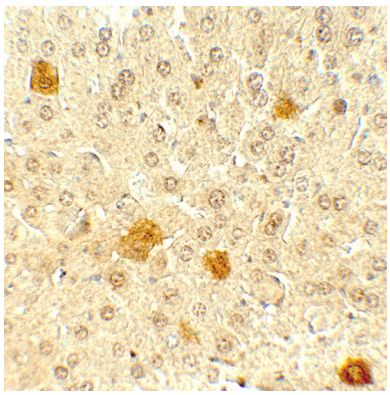
References

Miles MF, Barhite S, Sganga M, et al. Phosducin-like protein: an ethanol-responsive potential modulator of guanine nucleotide-binding protein function. Proc. Natl. Acad. Sci. USA 1993; 90:10831-5.
Ruiz-Gomez A, Humrich J, Murga C, et al. Phosphorylation of phosducin and phosducinlike protein by G protein-coupled receptor kinase 2. J. Biol. Chem. 2000; 275:29724-30.
Lou X, Bao R, Zhou CZ, et al. Structure of the thioredoxin-fold domain of human phosducin-like protein 2. Acta Crystallographica 2009; F65:67-70.
Stirling PC, Srayko M, Takhar KS, et al. Functional interaction between phosducin-like protein 2 and cytosolic chaperonin is essential for cytoskeltal protein function and cell cycle progrssion. Mol. Biol. Cell 2007; 18:2336-45.

Images

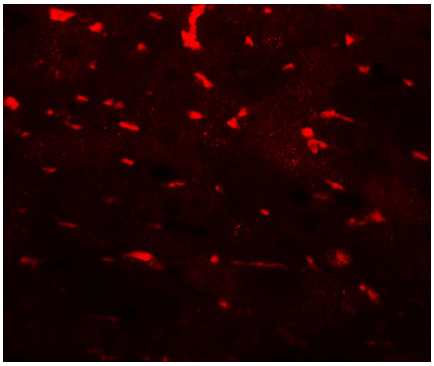


Western blot analysis of PDCL3 in human brain tissue lysate with PDCL3 antibody at 1 µg/ml.



Immunohistochemistry of PDCL3 in mouse lver tissue with PDCL3 antibody at 5 µg/mL.

Immunofluorescence of PDCL3 in mouse liver tissue with



PDCL3 antibody at 20 µg/mL.