

PCLAF (G-11): sc-390515

BACKGROUND

PCLAF is a 111 amino acid protein that localizes to both the nucleus and the mitochondria. Highly expressed in colon and thymus with lower expression in liver, ovary, kidney, spleen, placenta and small intestine, PCLAF interacts with the nuclear antigen PCNA and, through this interaction, is thought to protect cells from UV-induced cell death. The association of PCLAF and PCNA is enhanced by UV treatment and is facilitated by the binding of ING1, a tumor suppressor that can induce apoptosis. Due to its ability to bind the apoptotic factor ING1 and subsequently decrease the rate of cell death, high levels of PCLAF are found in several types of tumors, including esophageal and pancreatic cancer, suggesting an important role for PCLAF in tumor progression.

CHROMOSOMAL LOCATION

Genetic locus: PCLAF (human) mapping to 15q22.31; Pclaf (mouse) mapping to 9 C.

SOURCE

PCLAF (G-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 58-78 of PCLAF of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PCLAF (G-11) is available conjugated to agarose (sc-390515 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390515 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390515 PE), fluorescein (sc-390515 FITC), Alexa Fluor® 488 (sc-390515 AF488), Alexa Fluor® 546 (sc-390515 AF546), Alexa Fluor® 594 (sc-390515 AF594) or Alexa Fluor® 647 (sc-390515 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390515 AF680) or Alexa Fluor® 790 (sc-390515 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390515 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PCLAF (G-11) is recommended for detection of PCLAF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PCLAF siRNA (h): sc-62735, PCLAF siRNA (m): sc-62736, PCLAF shRNA Plasmid (h): sc-62735-SH, PCLAF shRNA Plasmid (m): sc-62736-SH, PCLAF shRNA (h) Lentiviral Particles: sc-62735-V and PCLAF shRNA (m) Lentiviral Particles: sc-62736-V.

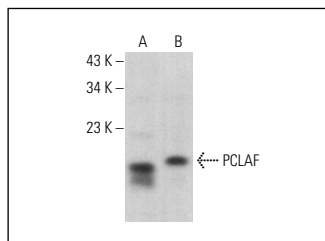
Molecular Weight of PCLAF: 12 kDa.

Positive Controls: J774.A1 cell lysate: sc-3802 or HeLa whole cell lysate: sc-2200.

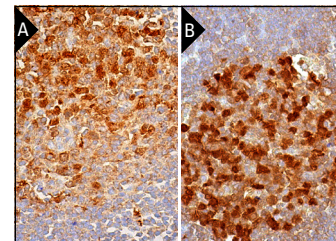
STORAGE

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

DATA



PCLAF (G-11): sc-390515. Western blot analysis of PCLAF expression in J774.A1 (A) and HeLa (B) whole cell lysates.



PCLAF (G-11): sc-390515. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node (A) and rat lymph node (B) tissue showing nuclear and cytoplasmic staining of cells in a germinal center.

SELECT PRODUCT CITATIONS

- Karg, E., et al. 2017. Ubiquitome analysis reveals PCNA-associated factor 15 (PAF15) as a specific ubiquitination target of UHRF1 in embryonic stem cells. *J. Mol. Biol.* 429: 3814-3824.
- Kim, M.J., et al. 2018. PAF-Myc-controlled cell stemness is required for intestinal regeneration and tumorigenesis. *Dev. Cell* 44: 582-596.e4.
- Nishiyama, A., et al. 2020. Two distinct modes of Dnmt1 recruitment ensure stable maintenance DNA methylation. *Nat. Commun.* 11: 1222.
- Wang, S., et al. 2020. Single cell transcriptomics of human epidermis identifies basal stem cell transition states. *Nat. Commun.* 11: 4239.
- Kim, M.J., et al. 2021. PAF remodels the DREAM complex to bypass cell quiescence and promote lung tumorigenesis. *Mol. Cell* 81: 1698-1714.e6.
- Liu, L.P., et al. 2021. Transcriptomic and functional evidence show similarities between human amniotic epithelial stem cells and keratinocytes. *Cells* 11: 70.
- Mengyan, X., et al. 2022. Identification and verification of hub genes associated with the progression of non-small cell lung cancer by integrated analysis. *Front. Pharmacol.* 13: 997842.
- Miyashita, R., et al. 2023. The termination of UHRF1-dependent PAF15 ubiquitin signaling is regulated by USP7 and ATAD5. *Elife* 12: e79013.
- Xie, L., et al. 2024. PCLAF induces bone marrow adipocyte senescence and contributes to skeletal aging. *Bone Res.* 12: 38.
- Davidsen, N., et al. 2024. Perfluorooctanesulfonic acid (PFOS) disrupts cadherin-16 in the developing rat thyroid gland. *Curr. Res. Toxicol.* 6: 100154.

RESEARCH USE

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

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