10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-PPHLN1 Antibody

Catalog # AP51442

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q8NEY8
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52737

Additional Information

Gene ID	51535
Other Names	Periphilin-1; Gastric cancer antigen Ga50
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human PPHLN1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	PPHLN1 (HGNC:19369)
Function	RNA-binding component of the HUSH complex, a multiprotein complex that mediates epigenetic repression of mobile genetic elements, such as retroviruses and transposable elements (PubMed:15474462, PubMed:17963697, PubMed:26022416, PubMed:32976585, PubMed:39658355). The HUSH complex mainly represses LINE-1 (L1) retrotransposons that are still capable of transposition (PubMed:32976585, PubMed:39658355). The HUSH complex is recruited to genomic loci rich in H3K9me3 and is probably required to maintain transcriptional silencing by promoting recruitment of SETDB1, a histone methyltransferase that mediates further deposition of H3K9me3, as well as MORC2, a chromatin remodeler that compacts chromatin (PubMed:26022416). The HUSH complex is also involved in the silencing of unintegrated retroviral DNA: some part of the retroviral DNA formed immediately after infection remains unintegrated in the host genome and is transcriptionally repressed (PubMed:30487602). Within the HUSH complex, PPHLN1 acts as a mRNA- binding component, which specifically binds nascent transcripts of mobile genetic elements,

enabling HUSH-dependent silencing of transcripts (PubMed:39658355). Contributes to the maintenance of the HUSH complex at chromatin (PubMed:26022416, PubMed:39013473). As part of the HUSH2 complex, promotes epigenetic repression of interferon- stimulated genes (PubMed:33144593, PubMed:39013473). May be involved in epithelial differentiation by contributing to epidermal integrity and barrier formation (PubMed:12853457).

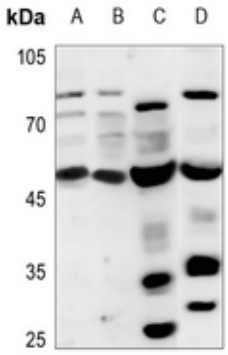
Cellular Location Nucleus. Cytoplasm. Chromosome. Note=In undifferentiated keratinocytes expressed in speckle-type nuclear granules and at the nuclear membrane, but in the differentiated keratinocytes colocalized with periplakin at the cell periphery and at cell-cell junctions (PubMed:12853457). Localizes to chromatin (PubMed:26022416).

Tissue Location Ubiquitous..

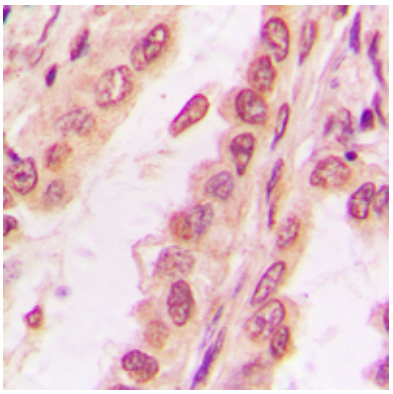
References

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Zhang Q.-H.,et al.Genome Res. 10:1546-1560(2000).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
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Images

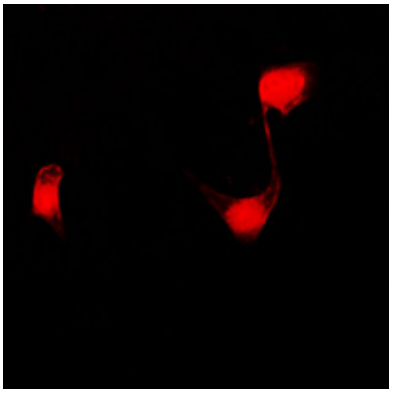


Western blot analysis of PPHLN1 expression in A549 (A), H446 (B), mouse liver (C), rat liver (D) whole cell lysates. (Predicted band size: 52 kD; Observed band size: 53 kD)



Immunohistochemical analysis of PPHLN1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of PPHLN1 staining in COLO205 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room



temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

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