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P100 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2044a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9ULW0
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB0559
Calculated MW	85653
Antigen Region	350-382

Additional Information

Gene ID	22974
Other Names	Targeting protein for Xklp2, Differentially expressed in cancerous and non-cancerous lung cells 2, DIL-2, Hepatocellular carcinoma-associated antigen 519, Hepatocellular carcinoma-associated antigen 90, Protein fls353, Restricted expression proliferation-associated protein 100, p100, TPX2, C20orf1, C20orf2, DIL2, HCA519
Target/Specificity	This P100 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 350-382 amino acids from human P100.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	P100 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TPX2

Synonyms	C20orf1, C20orf2, DIL2, HCA519
Function	Spindle assembly factor required for normal assembly of mitotic spindles. Required for normal assembly of microtubules during apoptosis. Required for chromatin and/or kinetochore dependent microtubule nucleation. Mediates AURKA localization to spindle microtubules (PubMed:18663142, PubMed:19208764, PubMed:37728657). Activates AURKA by promoting its autophosphorylation at 'Thr-288' and protects this residue against dephosphorylation (PubMed:18663142, PubMed:19208764). TPX2 is inactivated upon binding to importin-alpha (PubMed:26165940). At the onset of mitosis, GOLGA2 interacts with importin-alpha, liberating TPX2 from importin-alpha, allowing TPX2 to activate AURKA kinase and stimulate local microtubule nucleation (PubMed:26165940).
Cellular Location	Nucleus. Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, spindle pole. Note=During mitosis it is strictly associated with the spindle pole and with the mitotic spindle, whereas during S and G2, it is diffusely distributed throughout the nucleus. Is released from the nucleus in apoptotic cells and is detected on apoptotic microtubules.
Tissue Location	Expressed in lung carcinoma cell lines but not in normal lung tissues

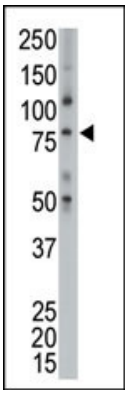
Background

The nuclear protein p100 is a proliferation-associated protein whose expression is restricted to cell cycle phases S, G2, and M. Exclusively expressed in proliferating cells from the transition G1/S until the end of cytokinesis. During mitosis it is strictly associated with the spindle pole and with the mitotic spindle, whereas during S and G2, it is diffusely distributed throughout the nucleus. The full-length cDNA encodes a 747-amino acid protein with a putative ATP/GTP-binding site motif. RT-PCR analysis demonstrated strong expression of in lung carcinoma cell lines but not in normal lung tissues. Expression was also found in adult placenta, skeletal muscle, thymus, testis, and small intestine and in fetal brain, liver, and kidney. P100 is also correlated to cancer prognosis.

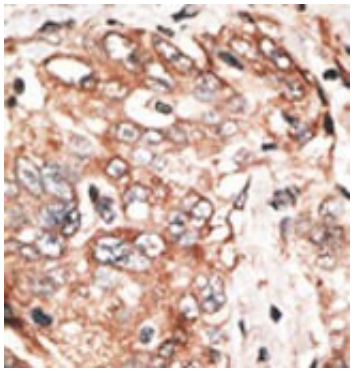
References

Ota, T., et al., Nat. Genet. 36(1):40-45 (2004).
Heidebrecht, H.J., et al., Mol. Cancer Res. 1(4):271-279 (2003).
Garrett, S., et al., Curr. Biol. 12(23):2055-2059 (2002).
Gruss, O.J., et al., Nat. Cell Biol. 4(11):871-879 (2002).
Kufer, T.A., et al., J. Cell Biol. 158(4):617-623 (2002).

Images



The anti-p100 Pab (Cat. #AP2044a) is used in Western blot to detect p100 in placenta lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.