

**P100 Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AW5052**

**Specification**

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**P100 Antibody - Product Information**

Application	WB,E
Primary Accession	<a href="#">O9ULW0</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	H=86 KDa
Isotype	Mouse IgG1
Antigen Source	HUMAN

**P100 Antibody - Additional Information**

**Gene ID** 22974

**Antigen Region**  
Multiple

**Other Names**

TPX2; C20orf1; C20orf2; DIL2; HCA519; Targeting protein for Xklp2; Differentially expressed in cancerous and non-cancerous lung cells 2; Hepatocellular carcinoma-associated antigen 519; Protein fls353; Restricted expression proliferation-associated protein 100

**Dilution**

WB~~1:1000

**Target/Specificity**

This monoclonal antibody is generated from mice immunized with a collection of antigenic peptides from different regions of P100.

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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.

**P100 Antibody - 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:<a href="http://www.uniprot.org/citations/18663142" target="\_blank">18663142</a>, PubMed:<a href="http://www.uniprot.org/citations/19208764" target="\_blank">19208764</a>, PubMed:<a href="http://www.uniprot.org/citations/37728657" target="\_blank">37728657</a>). Activates AURKA by promoting its autophosphorylation at 'Thr-288' and protects this residue against dephosphorylation (PubMed:<a href="http://www.uniprot.org/citations/18663142" target="\_blank">18663142</a>, PubMed:<a href="http://www.uniprot.org/citations/19208764" target="\_blank">19208764</a>). TPX2 is inactivated upon binding to importin-alpha (PubMed:<a href="http://www.uniprot.org/citations/26165940" target="\_blank">26165940</a>). 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:<a href="http://www.uniprot.org/citations/26165940" target="\_blank">26165940</a>).

### 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

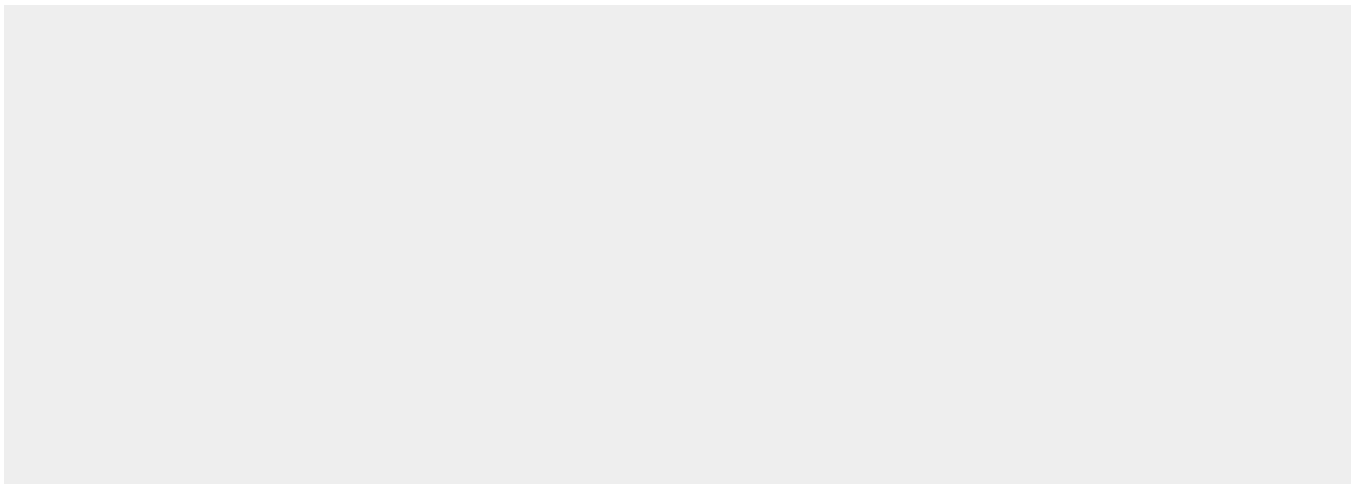
Expressed in lung carcinoma cell lines but not in normal lung tissues

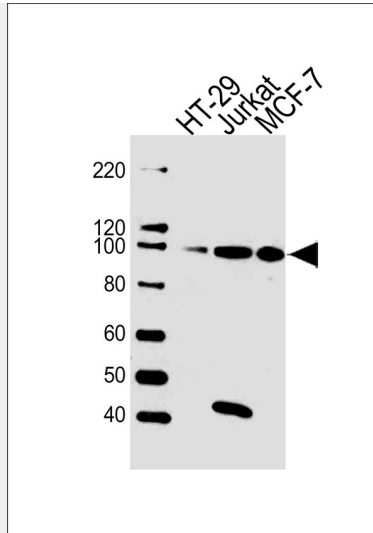
### P100 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### P100 Antibody - Images





Western blot analysis of lysates from HT-29, Jurkat, MCF-7 cell line (from left to right), using P100 Antibody (Cat. #AW5052). AW5052 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L (HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

#### **P100 Antibody - References**

Centrosome-related genes, genetic variation, and risk of breast cancer. Olson JE, et al. *Breast Cancer Res Treat*, 2010 May 28. PMID 20508983.

A cancer-associated aurora A mutant is mislocalized and misregulated due to loss of interaction with TPX2. Bibby RA, et al. *J Biol Chem*, 2009 Nov 27. PMID 19801554.

Association between genetic variants in VEGF, ERCC3 and occupational benzene haematotoxicity. Hosgood HD 3rd, et al. *Occup Environ Med*, 2009 Dec. PMID 19773279.

Overexpression of the receptor for hyaluronan-mediated motility, correlates with expression of microtubule-associated protein in human oral squamous cell carcinomas. Shigeishi H, et al. *Int J Oncol*, 2009 Jun. PMID 19424574.

Dynamic release of nuclear RanGTP triggers TPX2-dependent microtubule assembly during the apoptotic execution phase. Moss DK, et al. *J Cell Sci*, 2009 Mar 1. PMID 19208764.