

## PLK1

<b>CONTACT INFORMATION:</b>	Monoclonal Antibodies Unit. Centro Nacional de Investigaciones Oncológicas
<b>STATUS:</b>	Validated
<b>TYPE:</b>	Rat monoclonal
<b>CLONE NAME:</b>	POE125A
<b>PROTEIN:</b>	Serine/threonine-protein kinase PLK1
<b>PROTEIN WEB:</b>	<a href="https://www.uniprot.org/uniprot/Q07832">https://www.uniprot.org/uniprot/Q07832</a>
<b>ANTIGEN USED:</b>	HIS-hPlk1 full-length protein
<b>FUSION PARTNER:</b>	NS1/Ag4-1 (NS1) cells
<b>ISOTYPE:</b>	Unknown
<b>SPECIES REACTIVITY:</b>	human and mouse
<b>PREPARATION AND STORAGE:</b>	Aliquot and store at 4C. Do not freeze

### DESCRIPTION

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Serine/threonine-protein kinase that performs several important functions throughout M phase of the cell cycle, including the regulation of centrosome maturation and spindle assembly, the removal of cohesins from chromosome arms, the inactivation of anaphase-promoting complex/cyclosome (APC/C) inhibitors, and the regulation of mitotic exit and cytokinesis. Polo-like kinase proteins acts by binding and phosphorylating proteins that are already phosphorylated on a specific motif recognized by the POLO box domains.

### REFERENCES

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Wachowicz P, Fernández-Miranda G, Marugán C, Escobar B, de Cárcer G. Genetic depletion of Polo-like kinase 1 leads to embryonic lethality due to mitotic aberrancies. *Bioessays*. 2016 Jul;38 Suppl 1:S96-S106. doi: 10.1002/bies.201670908. PubMed PMID: 27417127.

Trakala M, Partida D, Salazar-Roa M, Maroto M, Wachowicz P, de Cárcer G, Malumbres M. Activation of the endomitotic spindle assembly checkpoint and thrombocytopenia in Plk1-deficient mice. *Blood*. 2015 Oct 1;126(14):1707-14. doi: 10.1182/blood-2015-03-634402. PubMed PMID: 26185128.

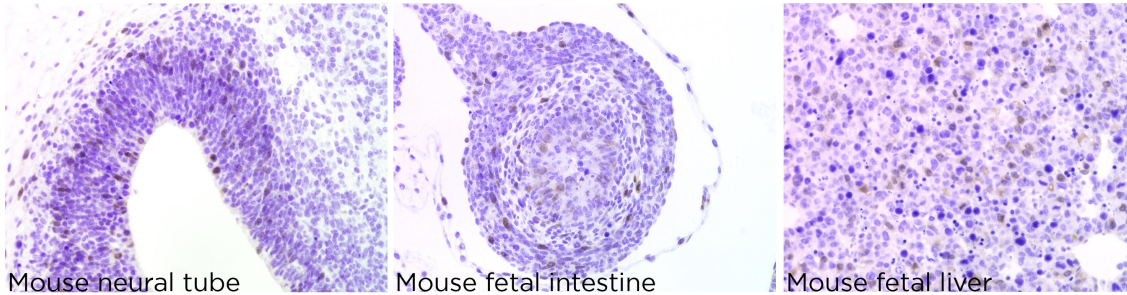
**APPLICATIONS**

IHC Techniques	Clone	Dilution	Antibody concentration	Antigen retrieval method	Visualization kit	Positive control	Negative control	Protein localization	Positivity in other species
<b>Frozen tissue and cytopins</b>									
Recommended	POE1 25A	Neat	supernatant						
<b>Paraffin tissue</b>									
Recommended	POE1 25A	Neat	supernatant		Ventana				
<b>Immunofluorescence</b>									



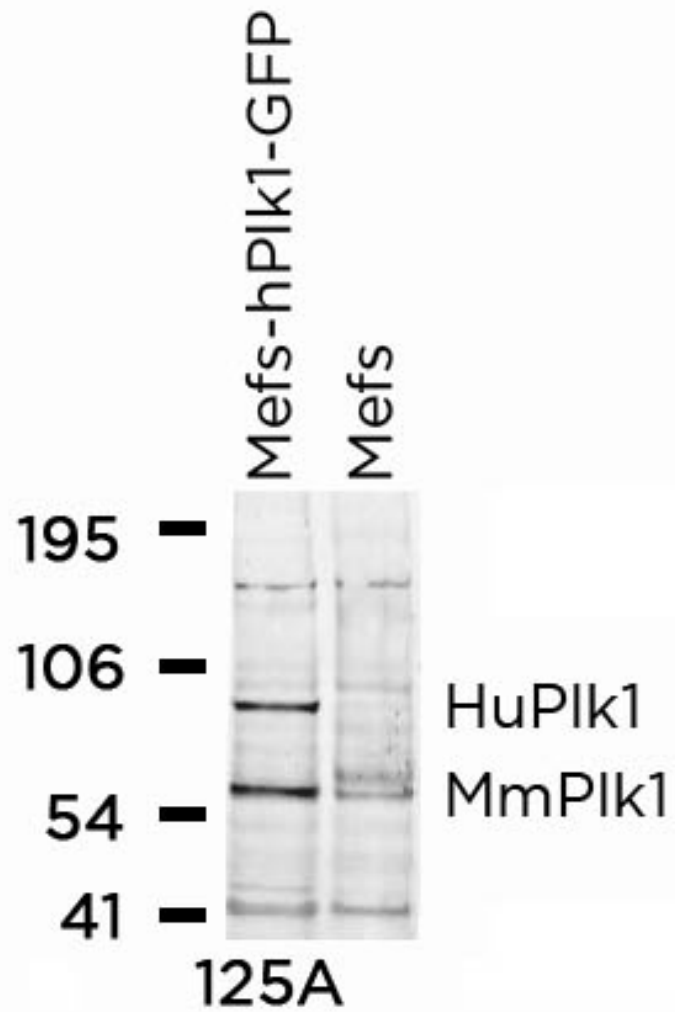
**POE125A is able to detect human and mouse Plk1 protein in immunocytochemistry**

To confirm that POE125A mAb recognizes human and mouse PLK1 protein, immunocytochemistry on frozen cytopsin preparations of GFP-tagged hPLK1 and mPLK1 expressed in HEK293T cell line was performed.



Mouse neural tube      Mouse fetal intestine      Mouse fetal liver  
**POE125A mAb can be used to detect PLK1 protein in mouse paraffin tissues**

WB Techniques	Clone	Dilution	Antibody concentration	Positive control	Negative control	Expected MW	Observed Mw	Positivity in other species
<b>Western Blotting</b>								
Recommended	POE125 A	Neat	supernatant			67kDa	67kDa	
<b>Immunoprecipitation</b>								



**POE125A mAb is able to detect mouse and human PIk1 protein by WB.**

LANES

Lane 1 Mefs-hPIk1-GFP (100ug) (+)

Lane 2 Mefs (100ug) (+)

mPIk1 endogenous expression in both lanes