

## Recombinant Mouse Plk2 Protein, Myc/DDK-tagged

Cat. No. Plk2-4937M Lot. No. (See product label)

### SPECIFICATION

#### Product Overview

Purified recombinant protein of mouse full-length polo like kinase 2 (Plk2), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

#### Species

Mouse

#### Source

HEK293

#### Description

Tumor suppressor serine/threonine-protein kinase involved in synaptic plasticity, centriole duplication and G1/S phase transition. Polo-like kinases act by binding and phosphorylating proteins that are already phosphorylated on a specific motif recognized by the POLO box domains. Phosphorylates CENPJ, NPM1, RAPGEF2, RASGRF1, SNCA, SIPA1L1 and SYNGAP1. Plays a key role in synaptic plasticity and memory by regulating the Ras and Rap protein signaling: required for overactivity-dependent spine remodeling by phosphorylating the Ras activator RASGRF1 and the Rap inhibitor SIPA1L1 leading to their degradation by the proteasome. Conversely, phosphorylates the Rap activator RAPGEF2 and the Ras inhibitor SYNGAP1, promoting their activity. Also regulates synaptic plasticity independently of kinase activity, via its interaction with NSF that disrupts the interaction between NSF and the GRIA2 subunit of AMPARs, leading to a rapid rundown of AMPAR-mediated current that occludes long term depression. Required for procentriole formation and centriole duplication by phosphorylating CENPJ and NPM1, respectively. Its induction by p53/TP53 suggests that it may participate in the mitotic checkpoint following stress.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA



<b>Molecular Mass</b>	77.8 kDa
<b>Purity</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Stability</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>Storage</b>	Store at -80 centigrade after receiving vials.
<b>Concentration</b>	>50 µg/mL as determined by microplate BCA method
<b>Storage Buffer</b>	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

## GENE INFORMATION

<b>Gene Name</b>	Plk2 polo like kinase 2 [ <i>Mus musculus</i> (house mouse) ]
<b>Official Symbol</b>	Plk2
<b>Synonyms</b>	PLK2; polo-like kinase 2 ( <i>Drosophila</i> ); serine/threonine-protein kinase PLK2; PLK-2; serum-inducible kinase; serine/threonine-protein kinase SNK; Snk
<b>Gene ID</b>	20620
<b>mRNA Refseq</b>	NM_152804
<b>Protein Refseq</b>	NP_690017
<b>UniProt ID</b>	P53351

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