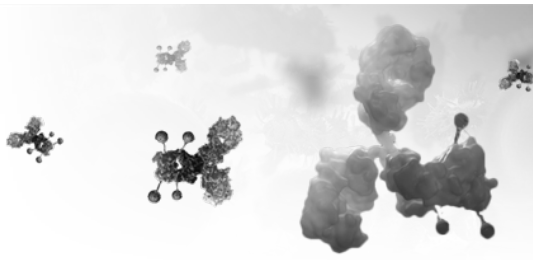

Rat Anti-Cdkn1b monoclonal antibody, clone TPO93 (CABT-RM130)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Specifically detects mouse p27Kip1 protein.
Target	Cdkn1b
Immunogen	His-tagged full-length recombinant murine p27 protein.
Isotype	IgG2a, κ
Source/Host	Rat
Species Reactivity	Mouse
Clone	TPO93
Purification	Protein G purified
Conjugate	unconjugated
Applications	IHC
Molecular Weight	22.19 kDa calculated.
Format	Liquid
Size	100 µg
Buffer	0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl
Preservative	0.05% sodium azide
Storage	Stable for 1 year at 2-8°C from date of receipt.

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

BACKGROUND

Introduction	Cyclin-dependent kinase inhibitor 1B is encoded by the Cdkn1b gene in murine species. p27Kip1 is a member of the universal cyclin-dependent kinase inhibitor family that serves as an important regulator of cell cycle progression. It inhibits the kinase activity of CDK2 bound to cyclin A. Its expression is regulated by cell contact inhibition and by specific growth factors. p27Kip1 is shown to be essential for the establishment of a G1 check point arrest after DNA damage. Phosphorylation of p27Kip1 by ATM kinase leads to its stabilization following DNA double strand breaks. In addition to its role as a cyclin-dependent kinase inhibitor p27Kip1 also acts as a tumor suppressor, regulator of drug resistance in solid tumors, and promoter of apoptosis. In quiescent cells it localizes in nucleus and cytoplasm and its levels are high that decline rapidly after stimulation with mitogens. Phosphorylation on serine 10 is the major site of phosphorylation in resting cells that takes place at the G0-G1 phase and leads to protein stability and facilitates nuclear export. Akt or Rsk- mediated phosphorylation on threonine 197 increases its interaction with 14-3-3 protein and allows it to translocates to the cytoplasm and promotes cell cycle progression. When phosphorylated on tyrosine 88 and 80, p27Kip1 translocates to the nucleus. Its nuclear localization signal is in amino acids 153-169.
Keywords	CDKN1B; cyclin-dependent kinase inhibitor 1B (p27, Kip1); cyclin-dependent kinase inhibitor 1B; KIP1; P27KIP1; AA408329; AI843786; Cdki1b; CDKN 1B; CDKN 4

GENE INFORMATION

Entrez Gene ID	12576
UniProt ID	P46414

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221