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CDKN1C

Reactivity: Human

Tested applications:WB IHC

Recommended Dilution:WB 1:500 - 1:2000 IHC 1:50 - 1:200

Calculated MW:32kDa

Observed MW: Refer to Figures

Immunogen:

A synthetic peptide of human CDKN1C

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

BWCR; BWS; KIP2; WBS; p57;

Catalog #:A2060

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID:1028

Isotype: IgG

Swiss Prot:P49918

Purity: Affinity purification

For research use only.

Background:

p27 Kip1 is a member of the Cip/Kip family of cyclin-dependent kinase inhibitors. Like its relatives, p57 Kip2 and p21 Waf1/Cip1, the ability to enforce the G1 restriction point is derived from its inhibitory binding to CDK2/cyclin E and other CDK/cyclin complexes. Expression levels of p27 are upregulated in quiescent cells and in cells treated with cAMP or other negative cell cycle regulators. Downregulation of p27 can be induced by treatment with interleukin-2 or other mitogens; this involves phosphorylation of p27 and its degradation by the ubiquitin-proteasome pathway (1-4).p57 Kip2 (Cyclin-dependent kinase inhibitor 1C) functions as a tumor suppressor. Mutations of p57 Kip2 have been associated with numerous human malignancies as well as BeckwithWiedemann syndrome (BWS), characterized by an increased risk of childhood cancer. The amino-terminal CDK inhibitory domain, common to the family, binds to and inhibits CDK/cyclin complexes and restricts cell cycle progression (5). The unique central region of p57 Kip2 interactes with LIMK-1, a downstream effector of the Rho family of GTPases. By sequestering LIMK-1 in the nucleus, p57 Kip2 disrupts actin dynamics within cells and may be linked to its essential role in embryonic development (6). In addition, the carboxyl-terminal QT domain of p57KIP2 binds to and inhibits JNK/SAPK activity regulating cellular apoptosis and differentiation (7). Expression levels of human p57 Kip2 are more restricted then other CDK inhibitors (8) and are controlled by ubiquitination/degradation via the Skp1/Cul1/F-box-type E3 ubiquitin ligase complex SCF-Skp2. This effect is dependent on Thr310 (9). A similar threonine phosphorylation site in p27 Kip1, Thr187, has also been shown to regulate protein stability (10).

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