p27 KIP 1 (ABT-p27) Mouse mAb

CatalogNo: YM4947 Recombinant

Key Features

Host Species
- Mouse

Reactivity
- Human

Applications
- WB,IHC,IF,ELISA

MW
- 22kD (Calculated)

24kD (Observed)

Isotype
- Mouse IgG1/Kappa

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA

Recommended Dilution Ratios

IHC 1:200-1000
WB 1:500-2000
IF 1:100-500
ELISA 1:1000-5000

Basic Information

Clonality	Monoclonal
Clone Number	ABT-p27

Immunogen Information

Immunogen	Synthesized peptide derived from human p27Kip1 AA range: 100-198
Specificity	This antibody detects endogenous levels of p27Kip1 protein.

Target Information

Gene name CDKN1B KIP1

Protein Name Cyclin-dependent kinase inhibitor 1B

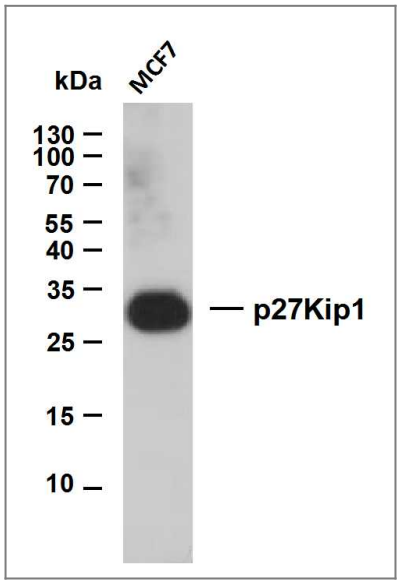
Organism	Gene ID	UniProt ID
Human	1027;	P46527;

Cellular Localization Nuclear

Tissue specificity Expressed in kidney (at protein level) (PubMed:15509543) . Expressed in all tissues tested (PubMed:8033212) . Highest levels in skeletal muscle , lowest in liver and kidney (PubMed:8033212) .

Function Disease:Defects in CDKN1B are the cause of multiple endocrine neoplasia type 4 (MEN4) [MIM:610755]. Multiple endocrine neoplasia (MEN) syndromes are inherited cancer syndromes of the thyroid. MEN4 is a MEN-like syndrome with a phenotypic overlap of both MEN1 and MEN2. ,Domain:A peptide sequence containing only AA 28-79 retains substantial Kip1 cyclin A/CDK2 inhibitory activity. ,Function:Important regulator of cell cycle progrssion. Involved in G1 arrest. Potent inhibitor of cyclin E- and cyclin A-CDK2 complexes. Positive regulator of cyclin D-dependent kinases such as CDK4. Regulated by phosphorylation and degradation events. ,induction:Maximal levels in quiescence cells and early G (1) . Levels decrease after mitogen stimulation as cells progress toward S-phase. ,miscellaneous:Decreased levels of p27Kip1 , mainly due to proteosomal degradation , are found in various epithelial tumors originating from lung , breast , colon , ovary , esophagus , thyroid and prostate. ,PTM:Phosphorylated; phosphorylation occurs on serine , threonine and tyrosine residues. Phosphorylation on Ser-10 is the major site of phosphorylation in resting cells , takes place at the G (0) -G (1) phase and leads to protein stability. Phosphorylation on other sites is greatly enhanced by mitogens , growth factors , cMYC and in certain cancer cell lines. The phosphorylated form found in the cytoplasm is inactivate. Phosphorylation on Thr-198 is required for interaction with 14-3-3 proteins. Phosphorylation on Thr-187 , by CDK2 leads to protein ubiquitination and proteasomal degradation. Tyrosine phosphorylation promotes this process. Phosphorylation by PKB/AKT1 can be suppressed by LY294002 , an inhibitor of the catalytic subunit of PI3K. Phosphorylation on Tyr-88 and Tyr-89 has no effect on binding CDK2 , but is required for binding CDK4. Dephosphorylated on tyrosine residues by G-CSF. ,PTM:Ubiquitinated; in the cytoplasm by the KPC1/KPC2 complex and , in the nucleus , by SCF/SKP2. The latter requires prior phosphorylation on Thr-187. ,similarity:Belongs to the CDI family. ,subcellular location:Nuclear and cytoplasmic in quiescent cells. AKT- or RSK-mediated phosphorylation on Thr-198 , binds 14-3-3 , translocates to the cytoplasm and promotes cell cycle progression. Mitogen-activated UHMK1 phosphorylation on Ser-10 also results in translocation to the cytoplasm and cell cycle progression. Phosphorylation on Ser-10 facilitates nuclear export. Translocates to the nucleus on phosphorylation of Tyr-88 and Tyr-89. ,subunit:Interacts with NUP50; the interaction leads to nuclear import and degradation of phosphorylated p27kip1. Interacts with COPS5 , subunit of the COP9 signalosome complex; the interaction leads to p27KIP degradation. Interacts with SPDYA in the SPDYA/CDK2/p27kip1 complex. Interacts (Thr-198 phosphorylated-form) with 14-3-3 proteins , binds strongly YWHAQ , weakly YWHAE and YWHAH , but not YWHAB nor YWHAZ; the interaction with YWHAQ results in translocation to the cytoplasm. Interacts with AKT1 , LYN and UHMK1; the interactions lead to cytoplasmic mislocation , phosphorylation of p27kip1 and inhibition of cell cycle arrest. Interacts (unphosphorylated form) with CDK2. Interacts (phosphorylated on Tyr-88 and Tyr-89) with CDK4; the interaction induces nuclear translocation. Interacts with GRB2. ,tissue specificity:Expressed in all tissues tested. Highest levels in skeletal muscle , lowest in liver and kidney. ,

Validation Data



Whole cell lysates were separated by 12% SDS-PAGE, and the membrane was blotted with anti-p27Kip1 (ABT-p27)antibody. The HRP-conjugated Goat anti-Mouse IgG (H + L) antibody was used to detect the antibody. Lane 1: MCF7

Contact information

Orders:	order.cn@immunoway.com
Support:	support.cn@immunoway.com
Telephone:	400-8787-807(China)
Website:	http://www.immunoway.com.cn
Address:	2200 Ringwood Ave San Jose, CA 95131 USA

Please scan the QR code to access additional product information:
p27 KIP 1 (ABT-p27) Mouse mAb