ARG55944
anti-p27 Kip1 antibody [SX53G8]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [SX53G8] recognizes p27 Kip1
Tested Reactivity	Hu, Ms, Rat
Tested Application	FACS, ICC/IF, IHC-P
Host	Mouse
Clonality	Monoclonal
Clone	SX53G8
Isotype	IgG1, kappa
Target Name	p27 Kip1
Species	Human
Immunogen	Purified fusion protein of Human p27 Kip1.
Conjugation	Un-conjugated
Alternate Names	Cyclin-dependent kinase inhibitor 1B; MEN4; KIP1; P27KIP1; Cyclin-dependent kinase inhibitor p27; p27Kip1; CDKN4; MEN1B

Application Instructions

Application table

Application	Dilution
FACS	0.5 - 1 µg/10^6 cells
ICC/IF	0.5 - 1 µg/ml
IHC-P	0.25 - 1 µg/ml

Application Note

IHC-P: Antigen Retrieval: Boil tissue section in 10 mM Citrate buffer (pH 6.0) for 10-20 min, followed by cooling at RT for 20 min.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

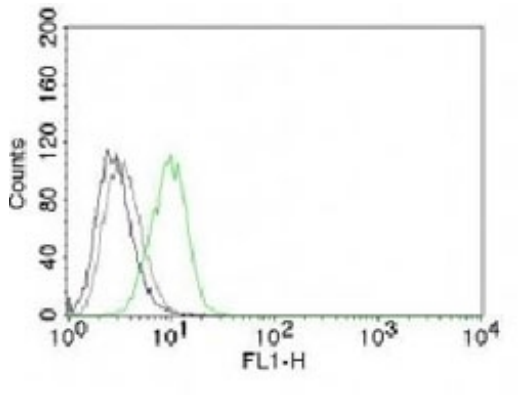
Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS (pH 7.4), 0.05% Sodium azide and 0.1 mg/ml BSA
Preservative	0.05% Sodium azide
Stabilizer	0.1 mg/ml BSA
Concentration	0.2 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated

	freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

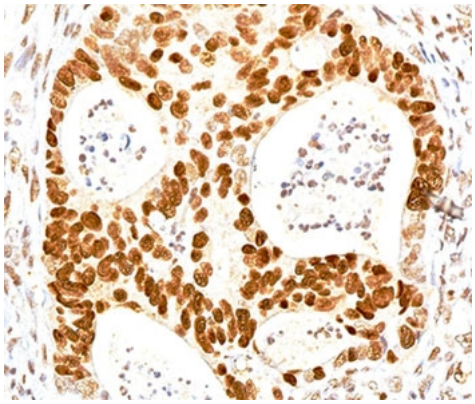
Database links	GeneID: 1027 Human GeneID: 12576 Mouse Swiss-port # P46414 Mouse Swiss-port # P46527 Human
Gene Symbol	CDKN1B
Gene Full Name	cyclin-dependent kinase inhibitor 1B (p27, Kip1)
Background	This gene encodes a cyclin-dependent kinase inhibitor, which shares a limited similarity with CDK inhibitor CDKN1A/p21. The encoded protein binds to and prevents the activation of cyclin E-CDK2 or cyclin D-CDK4 complexes, and thus controls the cell cycle progression at G1. The degradation of this protein, which is triggered by its CDK dependent phosphorylation and subsequent ubiquitination by SCF complexes, is required for the cellular transition from quiescence to the proliferative state. Mutations in this gene are associated with multiple endocrine neoplasia type IV (MEN4). [provided by RefSeq, Apr 2014]
Function	Important regulator of cell cycle progression. Involved in G1 arrest. Potent inhibitor of cyclin E- and cyclin A-CDK2 complexes. Forms a complex with cyclin type D-CDK4 complexes and is involved in the assembly, stability, and modulation of CCND1-CDK4 complex activation. Acts either as an inhibitor or an activator of cyclin type D-CDK4 complexes depending on its phosphorylation state and/or stoichometry. [UniProt]
Calculated Mw	22 kDa
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 CDK1 and 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. Ubiquitinated; in the cytoplasm by the KPC complex (composed of RNF123/KPC1 and UBAC1/KPC2) and, in the nucleus, by SCF(SKP2). The latter requires prior phosphorylation on Thr-187. Ubiquitinated; by a TRIM21-containing SCF(SKP2)-like complex; leads to its degradation. Subject to degradation in the lysosome. Interaction with SNX6 promotes lysosomal degradation (By similarity).
Cellular Localization	Nuclear

Images



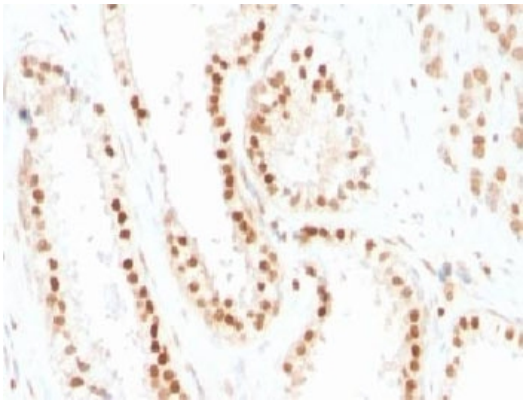
ARG55944 anti-p27 Kip1 antibody [SX53G8] FACS image

Flow Cytometry: HeLa cells stained with Alexa Fluor 488-conjugated ARG55944 anti-p27 Kip1 antibody [SX53G8] (green) and isotype control antibody (gray).



ARG55944 anti-p27 Kip1 antibody [SX53G8] IHC-P image

Immunohistochemistry: Human colon stained with ARG55944 anti-p27 Kip1 antibody [SX53G8].



ARG55944 anti-p27 Kip1 antibody [SX53G8] IHC-P image

Immunohistochemistry: Formalin-fixed, paraffin-embedded prostate carcinoma stained with ARG55944 anti-p27 Kip1 antibody [SX53G8].