abcam

ab215434

Anti-p27 KIP 1 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human CDKN1B aa 150 to C-terminus conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P46527
Purification technique	Affinity purification Protein A

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/100 - 1/1000
Notes	-

Expected

Species	Human, Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	When using a fluorescent secondary probe the recommended dilution is 1/50 - 1/200.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Rat
Dilution info	-
Notes	-

Expected

Species	Mouse, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CDKN1B

Function	Important regulator of cell cycle progression. Inhibits the kinase activity of CDK2 bound to cyclin A, but has little inhibitory activity on CDK2 bound to SPDYA (PubMed:28666995). 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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The protein known as p27 KIP1 also referred to as p27 CDKN1B or KIP1 is a member of the kinase inhibitory protein family. It plays an important role in cell cycle regulation by inhibiting cyclin-dependent kinases (CDKs). p27 KIP1 weighs approximately 27 kDa and can be found in various tissues where it regulates cell proliferation. The protein functions as a suppressor by binding to cyclin-CDK complexes preventing the transition from G1 phase to S phase in the cell division cycle.
Biological function summary	The function of p27 KIP1 involves its role in controlling cell growth and division. It achieves this by becoming a part of larger protein complexes involving CDKs and cyclins. By directly interacting with these complexes p27 KIP1 modulates cell cycle progression therefore acting as a brake on cellular proliferation. The protein is important in maintaining proper cell cycle checkpoints and preventing uncontrolled cell growth which is essential for normal cellular functioning.
Pathways	The involvement of p27 KIP1 centers on cell cycle regulation and signaling pathways such as the PI3K/AKT pathway. Its interaction with CDKs and cyclins situates it within the core mechanisms that determine cell division timing. p27 KIP1 operates alongside other proteins like cyclin D and CDK4/6 fitting into the regulatory intricacies of these pathways. Proper functioning of these pathways ensures cellular homeostasis and prevents the development of oncogenic processes.

Associated diseases and disorders	Dysfunction of p27 KIP1 has links to cancer and neurodegenerative diseases. Low levels or mutations can lead to uncontrolled cell proliferation contributing to the development and progression of cancers such as breast cancer. p27 KIP1's role in neurodegenerative diseases involves its regulation of neuronal cell cycle re-entry with abnormalities potentially exacerbating conditions like Alzheimer's disease. In these contexts its interaction with proteins such as cyclin E and CDK2 becomes particularly relevant in understanding disease mechanisms.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

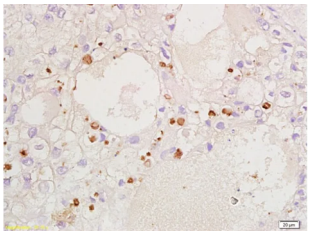
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

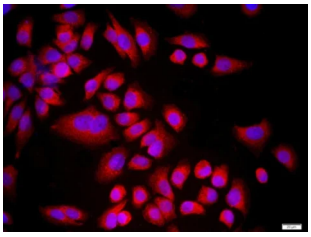
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p27 KIP 1 antibody (ab215434)

P27 KIP 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-p27 KIP 1 antibody

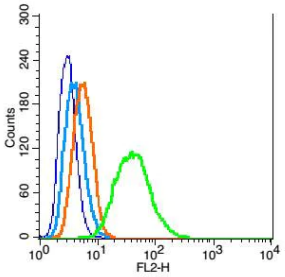
Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human ovary carcinoma tissue labeling p27 KIP 1 with ab215434 at 1/200 dilution, followed by conjugation to the secondary antibody and DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p27 KIP 1 antibody (ab215434)

P27 KIP 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-p27 KIP 1 antibody

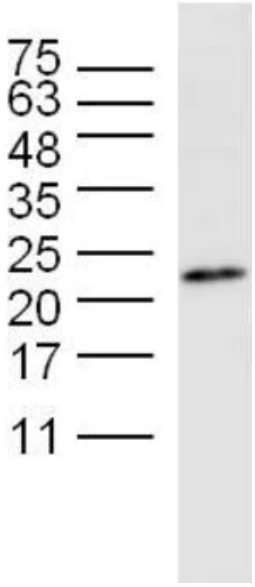
Immunohistochemical analysis of MCF-7 cells labeling p27 KIP 1 with ab215434 at 1/500 dilution in PBS for 2 hours at 37°C, followed by Goat anti-rabbit IgG (H+L), Cy3 conjugated secondary antibody. The nuclei were stained with DAPI.



Flow Cytometry (Intracellular) - Anti-p27 KIP 1 antibody (ab215434)

P27 KIP 1 Flow Cytometry (Intracellular) staining using rabbit Anti-p27 KIP 1 antibody

Intracellular flow cytometric analysis of rat RSC96 cells labeling p27 KIP 1 with ab215434 at 1/100 dilution for 30 minutes, followed by incubation with a PE conjugated secondary for 30 minutes (green), compared to control cells (blue),secondary only (light blue) and isotype control (orange).



Western blot - Anti-p27 KIP 1 antibody (ab215434)

All lanes:
Western blot - Anti-p27 KIP 1 antibody (ab215434) at 1/300 dilution

All lanes:
Mouse lung lysates

Secondary

All lanes:
conjugated secondary antibody (60 minutes at 37°C) at 1/10000 dilution

Predicted band size: 22 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.