abcam

## Product datasheet

# Mouse p27 Kip1 Matched Antibody Pair Kit ab217620

1 Image

### Overview

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|---|---|
| **Product name** | Mouse p27 Kip1 Matched Antibody Pair Kit |
| **Detection method** | Colorimetric |
| **Assay type** | ELISA set |
| **Sensitivity** | 5.8 pg/ml |
| **Range** | 31.25 pg/ml - 2000 pg/ml |
| **Species reactivity** | **Reacts with:** Mouse |
| **Product overview** | Mouse p27 Kip1 Matched Antibody Pair Kits include a capture and a biotinylated detector antibody pair, along with a calibrated protein standard, suitable for sandwich ELISA. The Matched Antibody Pair Kit can be used to quantify native and recombinant mouse p27 Kip1.<br><br>Optimization of the kit reagents to sample type, immunoassay format or instrumentation may be required. Guidelines for use of this kit in a standard 96-well microplate sandwich ELISA using HRP/TMB system of colorimetric detection is described in this assay procedure for the purposes of quantification.<br><br>Protocol information and tips on the use of the Matched Antibody Pair kits for sandwich ELISA can be found on our website. An accessory pack can be purchased which includes buffer reagents required to perform 10 x 96-well plate sandwich ELISAs (ab210905).<br><br>For additional information on the performance of the antibody pair used in this kit, please see our equivalent SimpleStep ELISA kit ab208982. Please note that while the antibody pair is the same provided in the corresponding SimpleStep ELISA Kit, due to differences in their formulation, this antibody pair cannot be used with the consumables provided with our SimpleStep ELISA Kits.<br><br>**We've listened to you: due to popular demand, we will now provide our Matched Antibody Pair kits in 5x96 tests and 10x96 tests. The 2x96 tests size will be discontinued on 30th June 2020 unless inventory is depleted beforehand.**<br><br>**To receive an electronic copy of the Certificate of Analysis, please send an email with "CoA for matched antibody pair kit" in the subject line and the desired product number and lot number in the body of the email.** |
| **Tested applications** | **Suitable for:** ELISA |
| **Platform** | Reagents |

## Properties

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| **Storage instructions** | Store at -20°C. Please refer to protocols. |

| Components | 10 x 96 tests | 5 x 96 tests |
|---|---|---|
| Mouse p27 Kip1 Capture Antibody | 1 x 100µg | 1 x 50µg |
| Mouse p27 Kip1 Detector Antibody | 1 x 25µg | 1 x 12.5µg |
| Mouse p27 Kip1 Lyophilized Protein | 1 vial | 1 vial |

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| **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. |
| **Tissue specificity** | Expressed in all tissues tested. Highest levels in skeletal muscle, lowest in liver and kidney. |
| **Involvement in 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. |
| **Sequence similarities** | Belongs to the CDI family. |
| **Domain** | A peptide sequence containing only AA 28-79 retains substantial Kip1 cyclin A/CDK2 inhibitory activity. |
| **Post-translational modifications** | 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.<br>Dephosphorylated on tyrosine residues by G-CSF.<br>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.<br>Subject to degradation in the lysosome. Interaction with SNX6 promotes lysosomal degradation. |
| **Cellular localization** | Nucleus. Cytoplasm. Endosome. 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. Colocalizes at the endosome with SNX6 and this leads to lysosomal degradation. |

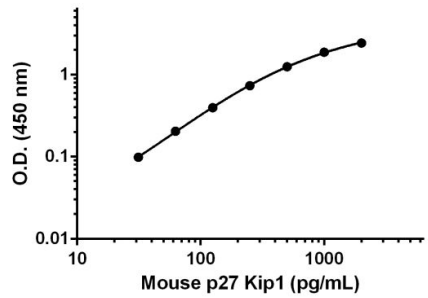
## Applications

Our Abpromise guarantee covers the use of **ab217620** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| ELISA | | Use at an assay dependent concentration. |

## Images




Mouse p27 Kip1 standard curve.

Standard calibration curve. Background subtracted values are graphed.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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