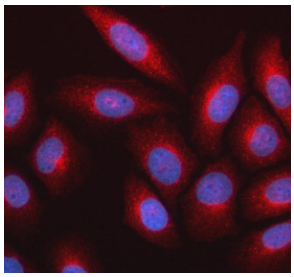
# PCTK1 Antibody / PCTAIRE Kinase Antibody (RQ6042)

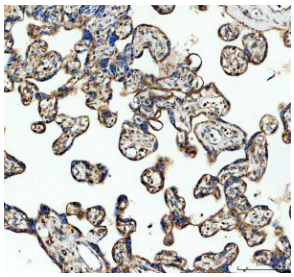
| Catalog No. | Formulation | Size |
|---|---|---|
| RQ6042 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

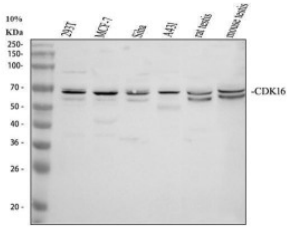
| | |
|---|---|
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Affinity purified |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | Q00536 |
| **Localization** | Cytoplasmic, plasma membrane |
| **Applications** | Western blot: 0.5-1ug/ml<br>Immunohistochemistry: 2-5ug/ml<br>Immunofluorescence: 5ug/ml<br>Direct ELISA: 0.1-0.5ug/ml |
| **Limitations** | This PCTK1 Antibody / PCTAIRE Kinase Antibody is available for research use only. |



PCTK1 Antibody Human Cervical Cancer Cell IF. Immunofluorescent staining of SiHa cells using PCTK1 antibody demonstrated predominantly cytoplasmic fluorescence (red), consistent with the localization of this PCTAIRE family kinase in intracellular signaling and vesicle trafficking pathways. Cells were treated with enzyme antigen retrieval reagent for 15 minutes, blocked with 10% goat serum, and incubated with the primary antibody (5 ug/ml) overnight at 4Â°C. Cy3-conjugated goat anti-rabbit IgG was used as the secondary antibody, and nuclei were counterstained with DAPI (blue). This PCTK1 Antibody, also called a PCTAIRE Kinase Antibody, is useful for investigating cyclin-dependent kinase signaling, vesicle trafficking, neuronal biology, and reproductive biology.



PCTK1 Antibody Human Placenta IHC. Immunohistochemical staining of FFPE human placenta tissue using PCTK1 antibody demonstrated predominantly cytoplasmic staining of trophoblast cells, consistent with the expression of this atypical cyclin-dependent kinase in actively proliferating and differentiating tissues. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer prior to staining. Tissue sections were blocked with 10% goat serum and incubated with the primary antibody (2 ug/ml) overnight at 4Â°C, followed by a peroxidase-conjugated goat anti-rabbit IgG secondary antibody. Immunoreactivity was visualized using an HRP Super Vision detection system with DAB as the chromogen. This PCTK1 Antibody, also called a PCTAIRE Kinase Antibody, is useful for investigating cyclin-dependent kinase signaling, vesicle trafficking, neuronal biology, and reproductive biology.




PCTK1 Antibody Human, Rat and Mouse WB. Western blot testing of human 293T (lane 1), MCF-7 (lane 2), SiHa (lane 3), A431 (lane 4), rat testis (lane 5), and mouse testis (lane 6) lysates using PCTK1 antibody detected a major band at approximately 65 kDa. Although the calculated molecular weight of CDK16/PCTK1 is approximately 56 kDa, slower migration is commonly observed, and the closely spaced doublet seen in several samples is consistent with different phosphorylation states or other post-translationally modified forms reported for this kinase. This PCTK1 Antibody, also called a PCTAIRE Kinase Antibody, is useful for investigating cyclin-dependent kinase signaling, vesicle trafficking, neuronal biology, and reproductive biology.

## Description

PCTK1 Antibody / PCTAIRE Kinase Antibody recognizes PCTK1, now officially designated Cyclin-Dependent Kinase 16 (CDK16), a serine/threonine protein kinase belonging to the PCTAIRE subfamily of cyclin-dependent kinases. Unlike classical cyclin-dependent kinases that primarily regulate cell cycle progression, PCTK1 performs specialized functions in intracellular signaling, membrane trafficking, neuronal development, and reproductive biology. Its kinase activity is regulated through association with cyclin Y and related regulatory proteins, allowing PCTK1 to coordinate phosphorylation events that influence diverse cellular processes. Because of these unique biological roles, PCTK1 has become an important research target in neuroscience, cancer biology, and signal transduction.

PCTK1 is highly expressed in the brain and testis, where it contributes to neuronal differentiation, synaptic vesicle trafficking, neurite outgrowth, and spermatogenesis. The kinase also regulates exocytosis, endocytosis, cytoskeletal organization, and intracellular membrane dynamics through phosphorylation of proteins involved in vesicular transport. Unlike many members of the cyclin-dependent kinase family, PCTK1 is not principally involved in driving the cell cycle but instead functions in specialized signaling pathways that maintain normal cellular physiology. These activities have established PCTK1 as a key regulator of neuronal function and reproductive tissue development.

Increasing evidence suggests that dysregulation of PCTK1 contributes to several human diseases, including cancer, neurodegenerative disorders, and abnormalities of male fertility. Altered expression has been reported in colorectal, prostate, lung, and other malignancies, where PCTK1 may influence tumor growth, migration, invasion, and therapeutic responses through regulation of intracellular signaling pathways. Ongoing investigations continue to define how PCTK1 integrates kinase signaling with vesicle trafficking, cytoskeletal remodeling, and cellular stress responses, making it an attractive target for both basic and translational research.

PCTK1 remains one of the best-characterized members of the PCTAIRE kinase family and serves as a model for understanding the specialized functions of atypical cyclin-dependent kinases. Its broad biological importance has made it a valuable target in studies of neuronal signaling, membrane trafficking, reproductive biology, and kinase-mediated regulation of cellular processes. A PCTK1 Antibody is a valuable research tool for investigating PCTAIRE kinases, intracellular signaling, vesicle trafficking, neuronal biology, and cyclin-dependent kinase function.

Explore additional research tools for kinase signaling, cell cycle regulation, and tumor biology on our Cancer Marker

Antibodies page.

## Application Notes

Optimal dilution of the PCTK1 Antibody / PCTAIRE Kinase Antibody should be determined by the researcher.

## Immunogen

Recombinant human protein (amino acids N392-H443) was used as the immunogen for the PCTK1 antibody.

## Storage

After reconstitution, the PCTK1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

## Alternate Names

PCTK1 antibody, PCTAIRE Kinase antibody, CDK16 antibody, Cyclin-Dependent Kinase 16 antibody


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