10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-CDK5RAP1 Antibody

Catalog # AP61320

## Product Information

| | |
|---|---|
| **Application** | WB, IHC, IF/IC |
| **Primary Accession** | Q96SZ6 |
| **Reactivity** | Human, Mouse, Mk |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 67689 |

## Additional Information

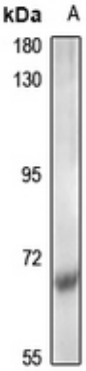
| | |
|---|---|
| **Gene ID** | 51654 |
| **Other Names** | C20orf34; CDK5 regulatory subunit-associated protein 1; CDK5 activator-binding protein C42 |
| **Target/Specificity** | KLH-conjugated synthetic peptide encompassing a sequence within the center region of human CDK5RAP1. The exact sequence is proprietary. |
| **Dilution** | WB~~WB (1/500 - 1/1000), IHC (1/50 - 1/200) IHC~~WB (1/500 - 1/1000), IHC (1/50 - 1/200) IF/IC~~N/A |
| **Format** | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

| | |
|---|---|
| **Name** | CDK5RAP1 ( HGNC:15880) |
| **Synonyms** | C20orf34 |
| **Function** | Methylthiotransferase that catalyzes the conversion of N6-(dimethylallyl)adenosine (i(6)A) to 2-methylthio-N6- (dimethylallyl)adenosine (ms(2)i(6)A) at position 37 (adjacent to the 3'-end of the anticodon) of four mitochondrial DNA-encoded tRNAs (Ser(UCN), Phe, Tyr and Trp) (PubMed:22422838, PubMed:25738458, PubMed:28981754). Essential for efficient and highly accurate protein translation by the ribosome (PubMed:22422838, PubMed:25738458, PubMed:28981754). Specifically inhibits CDK5 activation by CDK5R1 (PubMed:11882646). Essential for efficient mitochondrial protein synthesis and respiratory chain; shows pathological consequences in mitochondrial disease (PubMed:25738458). |
| **Cellular Location** | Mitochondrion. |

| | |
|---|---|
| **Tissue Location** | Expressed in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas (PubMed:10721722). Expressed in neurons of central nervous tissue (PubMed:10721722, PubMed:11882646) [Isoform 6]: High expression in placenta and lung. |

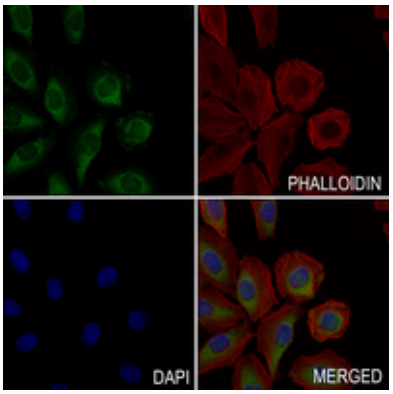
## Images




Western blot analysis of CDK5RAP1 expression in mouse lung (A) whole cell lysates. (Predicted band size: 67 kD; Observed band size: 68 kD)



Immunohistochemical analysis of CDK5RAP1 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.




Immunofluorescent analysis of CDK5RAP1 staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).



Immunohistochemical analysis of CDK5RAP1 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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