

CDK5RAP3 antibody - N-terminal region
Rabbit Polyclonal Antibody
Catalog # AI14753**Specification**

CDK5RAP3 antibody - N-terminal region - Product Information

Application	WB
Primary Accession	O96JB5
Other Accession	NM_176096 , NP_788276
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Dog
Predicted	Human, Mouse, Rat, Rabbit, Horse, Bovine, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	56kDa kDa

CDK5RAP3 antibody - N-terminal region - Additional Information**Gene ID** 80279**Alias Symbol** C53, HSF-27, IC53, LZAP, MST016, OK/SW-cl.114**Other Names**

CDK5 regulatory subunit-associated protein 3, CDK5 activator-binding protein C53, LXXLL/leucine-zipper-containing ARF-binding protein, Protein HSF-27, CDK5RAP3, IC53, LZAP {ECO:0000303|PubMed:20164180}

Format

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage

Add 50 ul of distilled water. Final anti-CDK5RAP3 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions

CDK5RAP3 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

CDK5RAP3 antibody - N-terminal region - Protein Information**Name** CDK5RAP3 {ECO:0000303|PubMed:30635284, ECO:0000312|HGNC:HGNC:18673}**Function**

Substrate adapter of E3 ligase complexes mediating ufmylation, the covalent attachment of the ubiquitin-like modifier UFM1 to substrate proteins, and which is involved in various processes, such as ribosome recycling and reticulophagy (also called ER-phagy) (PubMed:23152784, PubMed:23152784).

[30635284](http://www.uniprot.org/citations/30635284), PubMed: [32851973](http://www.uniprot.org/citations/32851973), PubMed: [36121123](http://www.uniprot.org/citations/36121123), PubMed: [36543799](http://www.uniprot.org/citations/36543799), PubMed: [37595036](http://www.uniprot.org/citations/37595036), PubMed: [38383785](http://www.uniprot.org/citations/38383785), PubMed: [38383789](http://www.uniprot.org/citations/38383789)). As part of the UREL complex, plays a key role in ribosome recycling by promoting mono-ufmylation of RPL26/uL24 subunit of the 60S ribosome (PubMed: [38383785](http://www.uniprot.org/citations/38383785), PubMed: [38383789](http://www.uniprot.org/citations/38383789)). Ufmylation of RPL26/uL24 occurs on free 60S ribosomes following ribosome dissociation: it weakens the junction between post-termination 60S subunits and SEC61 translocons, promoting release and recycling of the large ribosomal subunit from the endoplasmic reticulum membrane (PubMed: [38383785](http://www.uniprot.org/citations/38383785), PubMed: [38383789](http://www.uniprot.org/citations/38383789)). Ufmylation of RPL26/uL24 and subsequent 60S ribosome recycling either take place after normal termination of translation or after ribosome stalling during cotranslational translocation at the endoplasmic reticulum (PubMed: [32851973](http://www.uniprot.org/citations/32851973), PubMed: [37595036](http://www.uniprot.org/citations/37595036), PubMed: [38383785](http://www.uniprot.org/citations/38383785), PubMed: [38383789](http://www.uniprot.org/citations/38383789)). Within the UREL complex, CDK5RAP3 acts as a substrate adapter that constrains UFL1 ligase activity to mono-ufmylate RPL26/uL24 at 'Lys-134' (PubMed: [36121123](http://www.uniprot.org/citations/36121123), PubMed: [38383785](http://www.uniprot.org/citations/38383785), PubMed: [38383789](http://www.uniprot.org/citations/38383789)). The UREL complex is also involved in reticulophagy in response to endoplasmic reticulum stress by promoting ufmylation of proteins such as CYB5R3, thereby promoting lysosomal degradation of ufmylated proteins (PubMed: [36543799](http://www.uniprot.org/citations/36543799)). Also acts as a regulator of transcription: negatively regulates NF-kappa-B-mediated gene transcription through the control of RELA phosphorylation (PubMed: [17785205](http://www.uniprot.org/citations/17785205), PubMed: [20228063](http://www.uniprot.org/citations/20228063)). Also regulates mitotic G2/M transition checkpoint and mitotic G2 DNA damage checkpoint (PubMed: [15790566](http://www.uniprot.org/citations/15790566), PubMed: [19223857](http://www.uniprot.org/citations/19223857)). Through its interaction with CDKN2A/ARF and MDM2 may induce MDM2-dependent p53/TP53 ubiquitination, stabilization and activation in the nucleus, thereby promoting G1 cell cycle arrest and inhibition of cell proliferation (PubMed: [16173922](http://www.uniprot.org/citations/16173922)). May also play a role in the rupture of the nuclear envelope during apoptosis (PubMed: [23478299](http://www.uniprot.org/citations/23478299)). May regulate MAPK14 activity by regulating its dephosphorylation by PPM1D/WIP1 (PubMed: [21283629](http://www.uniprot.org/citations/21283629)). Required for liver development (By similarity).

Cellular Location

Endoplasmic reticulum membrane. Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton. Note=Tethered to the endoplasmic reticulum membrane as part of the UFM1 ribosome E3 ligase (UREL) complex (PubMed:38383785, PubMed:38383789). Colocalizes and associates with microtubules (PubMed:23478299)

Tissue Location

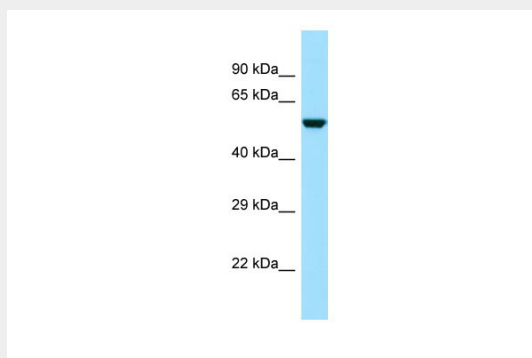
Ubiquitously expressed (PubMed:10721722, PubMed:12054757). Expressed in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Isoform 3 is expressed in kidney, liver, skeletal muscle and placenta (PubMed:12737517)

CDK5RAP3 antibody - N-terminal region - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CDK5RAP3 antibody - N-terminal region - Images



WB Suggested Anti-CDK5RAP3 Antibody Titration: 1.0 µg/ml
Positive Control: THP-1 Whole Cell

CDK5RAP3 antibody - N-terminal region - References

Chen J., et al. Biochem. Biophys. Res. Commun. 294:161-166(2002).
Xie Y.H., et al. Cell Res. 13:83-91(2003).
Favier A.-L., et al. Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
Shichijo S., et al. Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases.
Ota T., et al. Nat. Genet. 36:40-45(2004).