

**RPS3 Antibody (C-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP12605b****Specification**

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**RPS3 Antibody (C-term) Blocking peptide - Product Information**Primary Accession [P23396](#)**RPS3 Antibody (C-term) Blocking peptide - Additional Information****Gene ID** 6188**Other Names**

40S ribosomal protein S3, RPS3

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**RPS3 Antibody (C-term) Blocking peptide - Protein Information****Name** RPS3 {ECO:0000303|PubMed:11875025}**Function**

Component of the small ribosomal subunit (PubMed:<a href="http://www.uniprot.org/citations/8706699" target="\_blank">8706699</a>, PubMed:<a href="http://www.uniprot.org/citations/23636399" target="\_blank">23636399</a>). The ribosome is a large ribonucleoprotein complex responsible for the synthesis of proteins in the cell (PubMed:<a href="http://www.uniprot.org/citations/8706699" target="\_blank">8706699</a>, PubMed:<a href="http://www.uniprot.org/citations/23636399" target="\_blank">23636399</a>). Has endonuclease activity and plays a role in repair of damaged DNA (PubMed:<a href="http://www.uniprot.org/citations/7775413" target="\_blank">7775413</a>). Cleaves phosphodiester bonds of DNAs containing altered bases with broad specificity and cleaves supercoiled DNA more efficiently than relaxed DNA (PubMed:<a href="http://www.uniprot.org/citations/15707971" target="\_blank">15707971</a>). Displays high binding affinity for 7,8-dihydro-8-oxoguanine (8-oxoG), a common DNA lesion caused by reactive oxygen species (ROS) (PubMed:<a href="http://www.uniprot.org/citations/14706345" target="\_blank">14706345</a>). Has also been shown to bind with similar affinity to intact and damaged DNA (PubMed:<a href="http://www.uniprot.org/citations/18610840" target="\_blank">18610840</a>). Stimulates the N-glycosylase activity of the base excision protein OGG1 (PubMed:<a href="http://www.uniprot.org/citations/15518571" target="\_blank">15518571</a>). Enhances the uracil excision activity of UNG1 (PubMed:<a href="http://www.uniprot.org/citations/15518571" target="\_blank">15518571</a>).

href="http://www.uniprot.org/citations/18973764" target="\_blank">18973764</a>). Also stimulates the cleavage of the phosphodiester backbone by APEX1 (PubMed:<a href="http://www.uniprot.org/citations/18973764" target="\_blank">18973764</a>). When located in the mitochondrion, reduces cellular ROS levels and mitochondrial DNA damage (PubMed:<a href="http://www.uniprot.org/citations/23911537" target="\_blank">23911537</a>). Has also been shown to negatively regulate DNA repair in cells exposed to hydrogen peroxide (PubMed:<a href="http://www.uniprot.org/citations/17049931" target="\_blank">17049931</a>). Plays a role in regulating transcription as part of the NF-kappa-B p65-p50 complex where it binds to the RELA/p65 subunit, enhances binding of the complex to DNA and promotes transcription of target genes (PubMed:<a href="http://www.uniprot.org/citations/18045535" target="\_blank">18045535</a>). Represses its own translation by binding to its cognate mRNA (PubMed:<a href="http://www.uniprot.org/citations/20217897" target="\_blank">20217897</a>). Binds to and protects TP53/p53 from MDM2-mediated ubiquitination (PubMed:<a href="http://www.uniprot.org/citations/19656744" target="\_blank">19656744</a>). Involved in spindle formation and chromosome movement during mitosis by regulating microtubule polymerization (PubMed:<a href="http://www.uniprot.org/citations/23131551" target="\_blank">23131551</a>). Involved in induction of apoptosis through its role in activation of CASP8 (PubMed:<a href="http://www.uniprot.org/citations/14988002" target="\_blank">14988002</a>). Induces neuronal apoptosis by interacting with the E2F1 transcription factor and acting synergistically with it to up-regulate pro-apoptotic proteins BCL2L11/BIM and HRK/Dp5 (PubMed:<a href="http://www.uniprot.org/citations/20605787" target="\_blank">20605787</a>). Interacts with TRADD following exposure to UV radiation and induces apoptosis by caspase-dependent JNK activation (PubMed:<a href="http://www.uniprot.org/citations/22510408" target="\_blank">22510408</a>).

#### **Cellular Location**

Cytoplasm. Nucleus. Nucleus, nucleolus Mitochondrion inner membrane; Peripheral membrane protein. Cytoplasm, cytoskeleton, spindle. Note=In normal cells, located mainly in the cytoplasm with small amounts in the nucleus but translocates to the nucleus in cells undergoing apoptosis (By similarity). Nuclear translocation is induced by DNA damaging agents such as hydrogen peroxide (PubMed:17560175). Accumulates in the mitochondrion in response to increased ROS levels (PubMed:23911537) Localizes to the spindle during mitosis (PubMed:23131551). Localized in cytoplasmic mRNP granules containing untranslated mRNAs (PubMed:17289661).

{ECO:0000250|UniProtKB:P62908, ECO:0000269|PubMed:17289661,  
ECO:0000269|PubMed:17560175, ECO:0000269|PubMed:23131551,  
ECO:0000269|PubMed:23911537}

#### **RPS3 Antibody (C-term) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

#### **RPS3 Antibody (C-term) Blocking peptide - Images**

#### **RPS3 Antibody (C-term) Blocking peptide - Background**

Ribosomes, the organelles that catalyze protein synthesis, consist of a small 40S subunit and a large 60S subunit. Together these subunits are composed of 4 RNA species and approximately 80 structurally distinct proteins. This gene encodes a ribosomal protein that is a component of the 40S subunit, where it forms part of the domain where translation is initiated. The protein belongs to the S3P family of ribosomal proteins. Studies of the mouse and rat proteins have demonstrated that the protein has an extraribosomal role as an endonuclease involved in the repair of UV-induced DNA damage. The protein appears to be located in both the cytoplasm and nucleus but not in the nucleolus. Higher levels of expression of this gene in colon adenocarcinomas and adenomatous polyps compared to adjacent normal colonic mucosa have been observed. This gene is

co-transcribed with the small nucleolar RNA genes U15A and U15B, which are located in its first and fifth introns, respectively. As is typical for genes encoding ribosomal proteins, there are multiple processed pseudogenes of this gene dispersed through the genome.

#### **RPS3 Antibody (C-term) Blocking peptide - References**

Ahn, E.H., et al. Toxicology 276(3):192-197(2010) Kim, H.D., et al. J. Cell. Biochem. 110(2):294-303(2010) Yadavilli, S., et al. DNA Repair (Amst.) 8(10):1215-1224(2009) Kim, T.S., et al. J. Biol. Chem. 284(32):21201-21208(2009) Shin, H.S., et al. Biochem. Biophys. Res. Commun. 385(2):273-278(2009)