

RS3 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP6888b**Specification**

RS3 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P23396](#)**RS3 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 6188**Other Names**

40S ribosomal protein S3, RPS3

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP6888b](/products/AP6888b) was selected from the C-term region of human RS3. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

RS3 Antibody (C-term) Blocking Peptide - Protein Information**Name** RPS3 {ECO:0000303|PubMed:11875025}**Function**

Component of the small ribosomal subunit (PubMed: [8706699](http://www.uniprot.org/citations/8706699), PubMed: [23636399](http://www.uniprot.org/citations/23636399)). The ribosome is a large ribonucleoprotein complex responsible for the synthesis of proteins in the cell (PubMed: [8706699](http://www.uniprot.org/citations/8706699), PubMed: [23636399](http://www.uniprot.org/citations/23636399)). Has endonuclease activity and plays a role in repair of damaged DNA (PubMed: [7775413](http://www.uniprot.org/citations/7775413)). Cleaves phosphodiester bonds of DNAs containing altered bases with broad specificity and cleaves supercoiled DNA more efficiently than relaxed DNA (PubMed: [15707971](http://www.uniprot.org/citations/15707971)). Displays high binding affinity for 7,8-dihydro-8-oxoguanine (8-oxoG), a common DNA lesion caused by reactive

oxygen species (ROS) (PubMed:14706345). Has also been shown to bind with similar affinity to intact and damaged DNA (PubMed:18610840). Stimulates the N-glycosylase activity of the base excision protein OGG1 (PubMed:15518571). Enhances the uracil excision activity of UNG1 (PubMed:18973764). Also stimulates the cleavage of the phosphodiester backbone by APEX1 (PubMed:18973764). When located in the mitochondrion, reduces cellular ROS levels and mitochondrial DNA damage (PubMed:23911537). Has also been shown to negatively regulate DNA repair in cells exposed to hydrogen peroxide (PubMed:17049931). 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:18045535). Represses its own translation by binding to its cognate mRNA (PubMed:20217897). Binds to and protects TP53/p53 from MDM2-mediated ubiquitination (PubMed:19656744). Involved in spindle formation and chromosome movement during mitosis by regulating microtubule polymerization (PubMed:23131551). Involved in induction of apoptosis through its role in activation of CASP8 (PubMed:14988002). Induces neuronal apoptosis by interacting with the E2F1 transcription factor and acting synergistically with it to up-regulate pro-apoptotic proteins BCL2L1/BIM and HRK/Dp5 (PubMed:20605787). Interacts with TRADD following exposure to UV radiation and induces apoptosis by caspase-dependent JNK activation (PubMed:22510408).

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}

RS3 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

RS3 Antibody (C-term) Blocking Peptide - Images

RS3 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. RS3 is 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.

RS3 Antibody (C-term) Blocking Peptide - References

Khairulina,Iu.S., et.al., Bioorg. Khim. 34 (6), 773-780 (2008)