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

Specification

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:8706699, PubMed:23636399). The ribosome is a large ribonucleoprotein complex responsible for the synthesis of proteins in the cell (PubMed:8706699, PubMed:23636399). Has endonuclease activity and plays a role in repair of damaged DNA (PubMed:7775413). Cleaves phosphodiester bonds of DNAs containing altered bases with broad specificity and cleaves supercoiled DNA more efficiently than relaxed DNA (PubMed: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:<a

href="http://www.uniprot.org/citations/18973764" target="_blank">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 BCL2L11/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}

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. Togetherthese subunits are composed of 4 RNA species and approximately 80structurally distinct proteins. This gene encodes a ribosomalprotein that is a component of the 40S subunit, where it forms partof the domain where translation is initiated. The protein belongsto the S3P family of ribosomal proteins. Studies of the mouse andrat proteins have demonstrated that the protein has anextraribosomal role as an endonuclease involved in the repair ofUV-induced DNA damage. The protein appears to be located in boththe cytoplasm and nucleus but not in the nucleolus. Higher levelsof expression of this gene in colon adenocarcinomas and adenomatouspolyps compared to adjacent normal colonic mucosa have beenobserved. This gene is

co-transcribed with the small nucleolar RNAgenes U15A and U15B, which are located in its first and fifthintrons, respectively. As is typical for genes encoding ribosomalproteins, there are multiple processed pseudogenes of this genedispersed 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)