

**ENDOG Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP6571b****Specification**

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**ENDOG Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [Q14249](#)**ENDOG Antibody (C-term) Blocking Peptide - Additional Information**

Gene ID 2021

**Other Names**

Endonuclease G, mitochondrial, Endo G, 3130-, ENDOG

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP6571b](/products/AP6571b) was selected from the C-term region of human ENDOG. 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.

**ENDOG Antibody (C-term) Blocking Peptide - Protein Information**

Name ENDOG

**Function**

Endonuclease that preferentially catalyzes the cleavage of double-stranded 5-hydroxymethylcytosine (5hmC)-modified DNA (PubMed: [25355512](http://www.uniprot.org/citations/25355512)). The 5hmC-modified nucleotide does not increase the binding affinity, but instead increases the efficiency of cutting and specifies the site of cleavage for the modified DNAs (By similarity). Shows significantly higher affinity for four-stranded Holliday junction over duplex and single-stranded DNAs (By similarity). Promotes conservative recombination when the DNA is 5hmC-modified (PubMed: [25355512](http://www.uniprot.org/citations/25355512)). Promotes autophagy through the suppression of mTOR by its phosphorylation-mediated interaction with YWHAG and its endonuclease activity-mediated DNA damage response (PubMed: [33473107](http://www.uniprot.org/citations/33473107)). GSK3-beta mediated phosphorylation of ENDOG enhances its interaction with YWHAG, leading to

the release of TSC2 and PIK3C3 from YWHAG resulting in mTOR pathway suppression and autophagy initiation (PubMed:<a href="http://www.uniprot.org/citations/33473107" target="\_blank">33473107</a>). Promotes cleavage of mtDNA in response to oxidative and nitrosative stress, in turn inducing compensatory mtDNA replication (PubMed:<a href="http://www.uniprot.org/citations/29719607" target="\_blank">29719607</a>).

#### **Cellular Location**

Mitochondrion.

#### **ENDOG Antibody (C-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

#### **ENDOG Antibody (C-term) Blocking Peptide - Images**

#### **ENDOG Antibody (C-term) Blocking Peptide - Background**

ENDOG is a nuclear encoded endonuclease that is localized in the mitochondrion. The protein is widely distributed among animals and cleaves DNA at GC tracts. This protein is capable of generating the RNA primers required by DNA polymerase gamma to initiate replication of mitochondrial DNA.

#### **ENDOG Antibody (C-term) Blocking Peptide - References**

Noda,T., Apoptosis 14 (3), 287-297 (2009)Wu,S.L., J. Biomed. Sci. 16, 6 (2009)Ahn,C.H., APMIS 116 (6), 534-537 (2008)