

**Anti-ENDOG Antibody**  
Catalog # AP53667**Specification****Anti-ENDOG Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q14249</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	32620

**Anti-ENDOG Antibody - Additional Information****Gene ID** 2021**Other Names**

Endonuclease G, mitochondrial; Endo G

**Target/Specificity**

Recognizes endogenous levels of ENDOG protein.

**Dilution**

WB~~1/500 - 1/1000

**Format**

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**Anti-ENDOG Antibody - 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

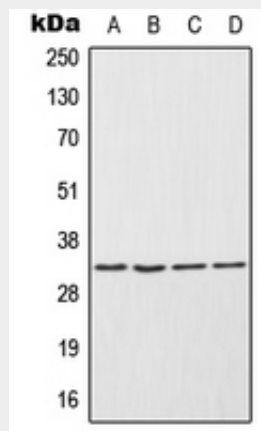
Mitochondrion.

#### Anti-ENDOG Antibody - 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](#)

#### Anti-ENDOG Antibody - Images



Western blot analysis of ENDOG expression in NCIH292 (A), HepG2 (B), Raw264.7 (C), PC12 (D) whole cell lysates.

#### Anti-ENDOG Antibody - Background

Rabbit polyclonal antibody to ENDOG