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ENDOG Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6571B

Specification

ENDOG Antibody (C-term) - Product Information

Application	**WB, FC,E**
Primary Accession	Q14249
Other Accession	O08600, P38447
Reactivity	**Human, Mouse**
Predicted	**Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**32620**
Antigen Region	**188-217**

ENDOG Antibody (C-term) - Additional Information

Gene ID 2021

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

Target/Specificity
This ENDOG antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 188-217 amino acids from the C-terminal region of human ENDOG.

Dilution
WB~~1:1000
FC~~1:10~50
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
ENDOG Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

ENDOG Antibody (C-term) - Protein Information

Name ENDOG

Function Endonuclease that preferentially catalyzes the cleavage of double-stranded 5-hydroxymethylcytosine (5hmC)-modified DNA (PubMed: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). Promotes autophagy through the suppression of mTOR by its phosphorylation-mediated interaction with YWHAG and its endonuclease activity-mediated DNA damage response (PubMed: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:33473107). Promotes cleavage of mtDNA in response to oxidative and nitrosative stress, in turn inducing compensatory mtDNA replication (PubMed:29719607).

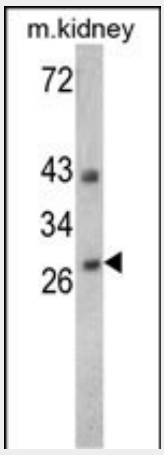
Cellular Location
Mitochondrion.

ENDOG Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ENDOG Antibody (C-term) - Images



Western blot analysis of ENDOG Antibody (C-term) (Cat. 3AP6571b) in 293,K562,Jurkat,NCI-H460 cell line lysates and mouse kidney tissues lysates(35ug/lane). ENDOG (arrow) was detected using the purified Pab.

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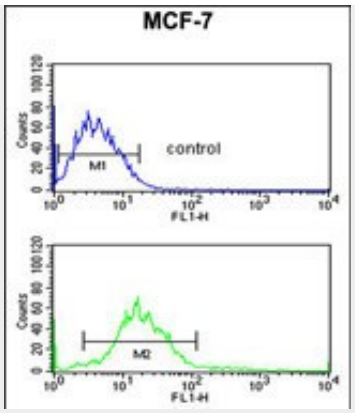

ENDOG Antibody (C-term) (Cat. #AP6571b) flow cytometric analysis of MCF-7 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

ENDOG Antibody (C-term) - 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) - 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)