

KO-Validated Anti-Endonuclease G Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2430

Product Information

Application	WB, FC, ICC
Primary Accession	Q14249
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB3035
Calculated MW	32620
Gene Name	ENDOG
Aliases	ENDOG; Endonuclease G; Endonuclease G, Mitochondrial; Endo G; Mitochondrial Endonuclease G; EC 3.1.30.-
Immunogen	A synthesized peptide derived from human Endo G

Additional Information

Gene ID	2021
Other Names	Endonuclease G, mitochondrial, Endo G, 3.1.30.-, ENDOG

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.