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KO-Validated Anti-Endonuclease G Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2430

Specification

KO-Validated Anti-Endonuclease G Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q14249
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 33 kDa; observed, 30 kDa KDa**
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**

KO-Validated Anti-Endonuclease G Rabbit Monoclonal Antibody - Additional Information

Gene ID **2021**

Other Names
Endonuclease G, mitochondrial, Endo G, 3.1.30.-, ENDOG

KO-Validated Anti-Endonuclease G Rabbit Monoclonal Antibody - 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).

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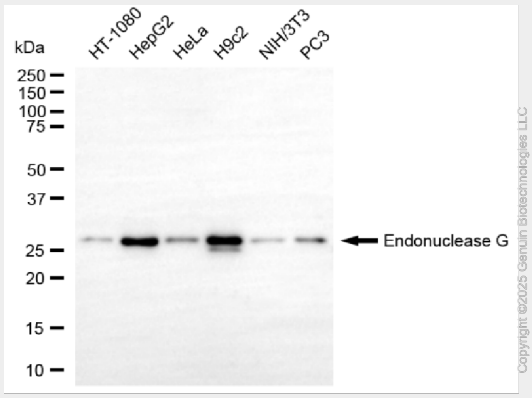
Cellular Location
Mitochondrion.

KO-Validated Anti-Endonuclease G Rabbit Monoclonal Antibody - Protocols

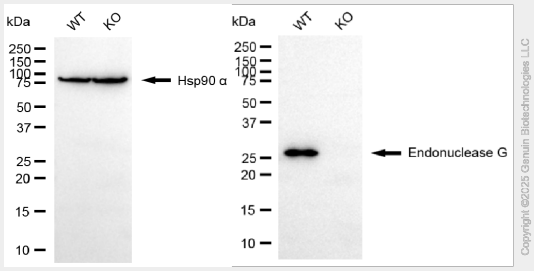
Provided below are standard protocols that you may find useful for product applications.

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

KO-Validated Anti-Endonuclease G Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-endonuclease G antibody (Cat#AGI2430). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-endonuclease G antibody (Cat#AGI2430, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-endonuclease G antibody (Cat#AGI2430). Endonuclease G expression in wild type (WT) and endonuclease G (ENDOG) knockout (KO) HSHC cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-endonuclease G antibody (Cat#AGI2430, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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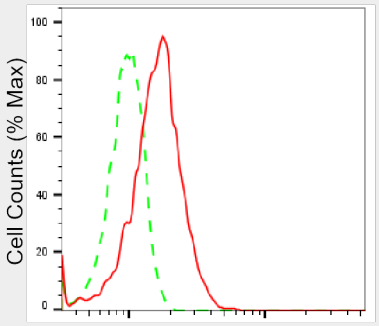
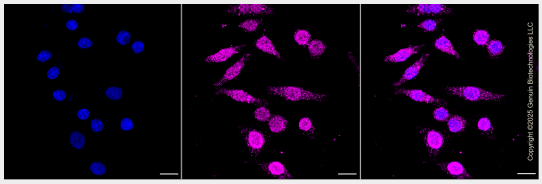


Flow cytometric analysis of Endonuclease G expression in HepG2 cells using anti-Endonuclease G antibody (Cat#AGI2430, 1:2,000). Green, isotype control; red, Endonuclease G.



Immunocytochemical staining of HepG2 cells with anti-Endonuclease G antibody (Cat#AGI2430, 1:1,000). Nuclei were stained blue with DAPI; Endonuclease G was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.