

Endo G Rabbit mAb

Catalog No: #49763



Package Size: #49763-1 50ul #49763-2 100ul

Orders: order@signalwayantibody.comSupport: tech@signalwayantibody.com

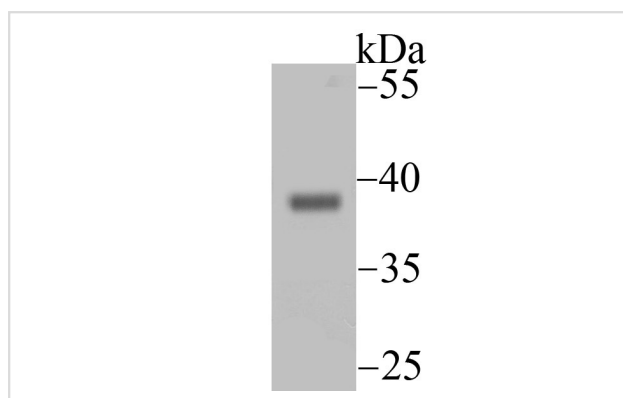
Description

Product Name	Endo G Rabbit mAb
Host Species	Recombinant Rabbit
Clonality	Monoclonal antibody
Clone No.	JU31-30
Purification	ProA affinity purified
Applications	WB, ICC
Species Reactivity	Hu
Immunogen Description	Recombinant protein
Other Names	EndoG antibody Endonuclease G antibody Endonuclease G mitochondrial antibody EndonucleaseG antibody FLJ27463 antibody Mitochondrial endonuclease G antibody NUCG_HUMAN antibody
Accession No.	Swiss-Prot#:Q14249
Calculated MW	36 kDa
Formulation	1*TBS (pH7.4), 1%BSA, 40%Glycerol. Preservative: 0.05% Sodium Azide.
Storage	Store at -20°C

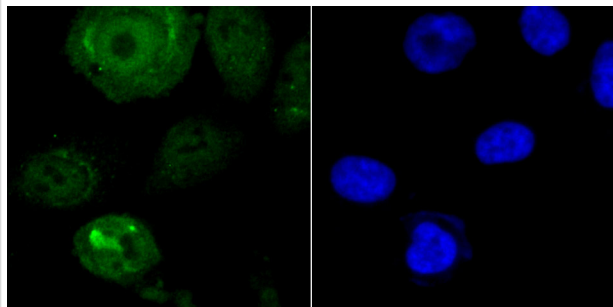
Application Details

WB: 1:500-1:1,000 ICC: 1:50-1:200

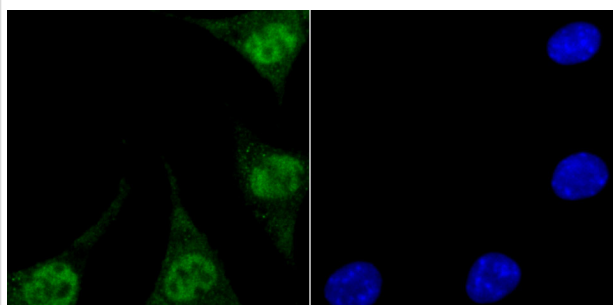
Images



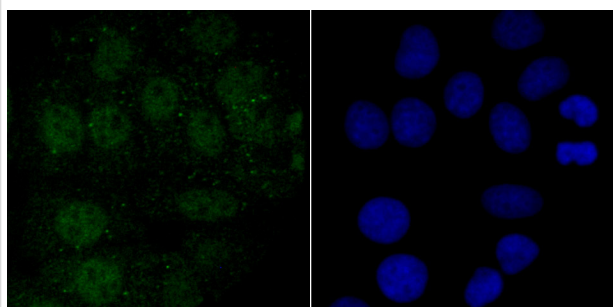
Western blot analysis of Endo G on mouse heart tissue lysate using anti-Endo G antibody at 1/500 dilution.



ICC staining Endo G in PC-3M cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.



ICC staining Endo G in SH-SY5Y cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.



ICC staining Endo G in MCF-7 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised

Background

Endonuclease G (ENDOG), a nuclear encoded protein, localizes to the mitochondria. This sugar-nonspecific nuclease, responsible for major mitochondrial nuclease activity, preferentially cleaves single-stranded DNA(ssDNA). Synthesized as a propeptide with an amino-terminal presequence that targets the nuclease to mitochondria, ENDOG translocates to nuclei on apoptotic stimulation and act as a nuclease without sequence specificity. Both exonucleases and DNase I stimulate the ability of ENDOG to generate double-stranded DNA cleavage products at physiological ionic strengths, suggesting that these activities work in concert with ENDOG in apoptotic cells to ensure efficient DNA breakdown. In addition to deoxyribonuclease activities, ENDOG also has ribonuclease (RNase) and RNase H activities. ENDOG is capable of generating the RNA primers required by DNA polymerase gamma to initiate replication of mitochondrial DNA. ENDOG exists in the mitochondrial intermembrane space, but not in the matrix where mtDNA replication occurs. This enzyme provides an important nicking function for mitochondrial DNA specifically cleaving DNA at GC tracts. Human ENDOG maps to chromosome 9q34.11.

References

1. Gerhard DS et al. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). *Genome Res* 14:2121-2127 (2004).
2. Studencka M et al. Senoptosis: non-lethal DNA cleavage as a route to deep senescence. *Oncotarget* 8(19):30656-30671 (2017).

Note: This product is for in vitro research use only and is not intended for use in humans or animals.