

GEN1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP9493a

Product Information

| | |
|-------------------|------------------------|
| Application | WB, E |
| Primary Accession | Q17RS7 |
| Reactivity | Human, Mouse |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | Rabbit IgG |
| Calculated MW | 102884 |
| Antigen Region | 60-89 |

Additional Information

| | |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID | 348654 |
| Other Names | Flap endonuclease GEN homolog 1, 31--, GEN1 |
| Target/Specificity | This GEN1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 60-89 amino acids from the N-terminal region of human GEN1. |
| Dilution | WB~~1:1000 E~~Use at an assay dependent concentration. |
| Format | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| 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 | GEN1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

Protein Information

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|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | GEN1 |
| Function | Endonuclease which resolves Holliday junctions (HJs) by the introduction of symmetrically related cuts across the junction point, to produce nicked duplex products in which the nicks can be readily ligated. Four-way DNA intermediates, also known as Holliday junctions, are formed during homologous recombination and DNA repair, and their resolution is necessary for proper chromosome segregation (PubMed: 19020614 , PubMed: 26682650). |

Cleaves HJs by a nick and counter-nick mechanism involving dual coordinated incisions that lead to the formation of ligatable nicked duplex products. Cleavage of the first strand is rate limiting, while second strand cleavage is rapid. Largely monomeric, dimerizes on the HJ and the first nick occurs upon dimerization at the junction (PubMed:[26578604](#)). Efficiently cleaves both single and double HJs contained within large recombination intermediates. Exhibits a weak sequence preference for incision between two G residues that reside in a T-rich region of DNA (PubMed:[28049850](#)). Also has endonuclease activity on 5'-flap and replication fork (RF) DNA substrates (PubMed:[26578604](#)).

Cellular Location

Nucleus

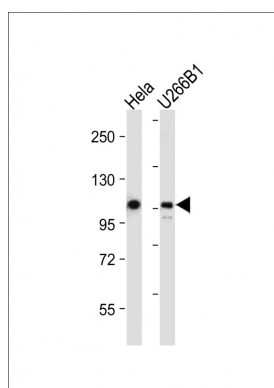
Background

Endonuclease which cleaves flap structures at the junction between single-stranded DNA and double-stranded DNA. Specific for 5'-overhanging flap structures in which the 5'-upstream of the flap is completely double-stranded. Prefers the blocked-flap structures similar to those occurring at replication forks, in which the 5' single-strand overhang of the flap is double-stranded (By similarity).

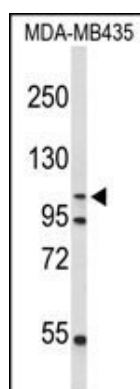
References

Ip, S.C., et al. Nature 456(7220):357-361(2008)
Ishikawa, G., et al. Nucleic Acids Res. 32(21):6251-6259(2004)

Images

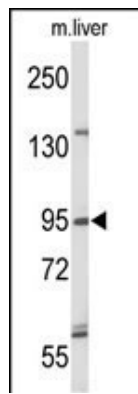


All lanes : Anti-GEN1 Antibody (N-term) at 1:2000 dilution
Lane 1: HeLa whole cell lysate Lane 2: U266B1 whole cell lysate
Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 103 kDa
Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of GEN1 Antibody (N-term) (Cat. #AP9493a) in MDA-MB435 cell line lysates (35ug/lane). GEN1 (arrow) was detected using the purified Pab;

Western blot analysis of GEN1 Antibody (N-term) (Cat. #AP9493a) in mouse liver tissue lysates (35ug/lane). GEN1 (arrow) was detected using the purified Pab.



Citations

- [ATRX and RECQ5 define distinct homologous recombination subpathways](#)

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