

**FEN1 Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP2856c****Specification**

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**FEN1 Antibody (Center) Blocking Peptide - Product Information**Primary Accession [P39748](#)**FEN1 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 2237**Other Names**

Flap endonuclease 1 {ECO:0000255|HAMAP-Rule:MF\_03140}, FEN-1  
{ECO:0000255|HAMAP-Rule:MF\_03140}, 31-- {ECO:0000255|HAMAP-Rule:MF\_03140}, DNase IV,  
Flap structure-specific endonuclease 1 {ECO:0000255|HAMAP-Rule:MF\_03140}, Maturation factor  
1, MF1, hFEN-1, FEN1 {ECO:0000255|HAMAP-Rule:MF\_03140}, RAD2

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP2856c](/products/AP2856c) was selected from the Center region of human FEN1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**FEN1 Antibody (Center) Blocking Peptide - Protein Information****Name** FEN1 {ECO:0000255|HAMAP-Rule:MF\_03140}**Synonyms** RAD2**Function**

Structure-specific nuclease with 5'-flap endonuclease and 5'- 3' exonuclease activities involved in DNA replication and repair. During DNA replication, cleaves the 5'-overhanging flap structure that is generated by displacement synthesis when DNA polymerase encounters the 5'-end of a downstream Okazaki fragment. It enters the flap from the 5'-end and then tracks to cleave the flap base, leaving a nick for ligation. Also involved in the long patch base excision repair (LP-BER) pathway, by cleaving within the apurinic/apyrimidinic (AP) site- terminated flap. Acts as a genome stabilization factor that prevents flaps from equilibrating into structures that lead to duplications

and deletions. Also possesses 5'-3' exonuclease activity on nicked or gapped double-stranded DNA, and exhibits RNase H activity. Also involved in replication and repair of rDNA and in repairing mitochondrial DNA.

**Cellular Location**

[Isoform 1]: Nucleus, nucleolus. Nucleus, nucleoplasm. Note=Resides mostly in the nucleoli and relocalizes to the nucleoplasm upon DNA damage

**FEN1 Antibody (Center) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**FEN1 Antibody (Center) Blocking Peptide - Images****FEN1 Antibody (Center) Blocking Peptide - Background**

FEN1 removes 5' overhanging flaps in DNA repair and processes the 5' ends of Okazaki fragments in lagging strand DNA synthesis. Direct physical interaction between this protein and AP endonuclease 1 during long-patch base excision repair provides coordinated loading of the proteins onto the substrate, thus passing the substrate from one enzyme to another. This protein is a member of the XPG/RAD2 endonuclease family and is one of ten proteins essential for cell-free DNA replication. DNA secondary structure can inhibit flap processing at certain trinucleotide repeats in a length-dependent manner by concealing the 5' end of the flap that is necessary for both binding and cleavage by the protein encoded by this gene. Therefore, secondary structure can deter the protective function of this protein, leading to site-specific trinucleotide expansions.

**FEN1 Antibody (Center) Blocking Peptide - References**

Hiraoka L.R., Harrington J.J., Gerhard D.S., Genomics 25:220-225(1995) Robins P., Pappin D.J.C., Wood R.D., Lindahl T.J. Biol. Chem. 269:28535-28538(1994) Gary R., Ludwig D.L., Cornelius H.L., MacInnes M.A.J. Biol. Chem. 272:24522-24529(1997)