Revision 1

Store at -20C

#2746

FEN-1 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	45	Rabbit	#P39748	2237

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

FEN-1 Antibody detects endogenous levels of total FEN-1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids surrounding Lys313 of human FEN-1. Antibodies are purified by peptide affinity chromatography.

Background

Flap endonuclease-1 (FEN-1) is a structure-specific nuclease with multiple functions in DNA processing pathways (1,2). The replication and DNA repair activities of FEN-1 are critical for genomic stability in the eukaryotic cell. Through interaction with proliferation cell nuclear antigen (PCNA), FEN-1 helps coordinate Okazaki fragment maturation by removing RNA-DNA primers (3). FEN-1 is also required for non-homologous end joining of double-stranded DNA breaks in long patch base excision repair (4,5). The multi-functional activities of FEN-1 are regulated by various mechanisms, including protein partner interactions (6,7), post-translational modifications (8,9), and subcellular re-localization in response to cell cycle or DNA damage (10).

Background References

1. Shen, B. et al. (2005) *Bioessays* 27, 717-29.
2. Liu, Y. et al. (2004) *Annu. Rev. Biochem.* 73, 589-615.
3. Sakurai, S. et al. (2005) *EMBO J.* 24, 683-93.
4. Wu, X. et al. (1999) *Proc. Natl. Acad. Sci. USA* 96, 1303-8.
5. Gary, R. et al. (1999) *J. Biol. Chem.* 274, 4354-63.
6. Brosh, R.M. et al. (2001) *EMBO J.* 20, 5791-801.
7. Sharma, S. et al. (2004) *J. Biol. Chem.* 279, 9847-56.
8. Henneke, G. et al. (2003) *Oncogene* 22, 4301-13.
9. Hasan, S. et al. (2001) *Mol. Cell* 7, 1221-31.
10. Qiu, J. et al. (2001) *J. Biol. Chem.* 276, 4901-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

Trademarks and Patents

Limited Uses

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