

FEN-1 (m): 293T Lysate: sc-120234

BACKGROUND

DNA replication, recombination and repair, all of which are necessary for genome stability, require the presence of exonucleases. In DNA replication, these enzymes are involved in the processing of Okazaki fragments, whereas in DNA repair, they function to excise damaged DNA fragments and correct recombinational mismatches. FEN-1 (for flap endonuclease) is an endonuclease that specifically cleaves the 5' flap structure of DNA in the process of DNA repair. FEN-1 is highly homologous to yeast Rad2. The C-terminal region of FEN-1 may bind to PCNA, thus allowing FEN-1 to function as an exonuclease in DNA replication.

REFERENCES

1. Goulian, M., et al. 1990. Discontinuous DNA synthesis by purified mammalian proteins. *J. Biol. Chem.* 265: 18461-18471.
2. Waga, S., et al. 1994. Reconstitution of complete SV40 DNA replication with purified replication factors. *J. Biol. Chem.* 269: 10923-10934.
3. Harrington, J.J., et al. 1994. Functional domains within FEN-1 and Rad2 define a family of structure-specific endonucleases: implications for nucleotide excision repair. *Genes Dev.* 8: 1344-1355.
4. Johnson, R.E., et al. 1995. Requirement of the yeast RTH1 5' to 3' exonuclease for the stability of simple repetitive DNA. *Science* 269: 238-240.
5. Sommers, C.H., et al. 1995. Conditional lethality of null mutations in RTH1 that encodes the yeast counterpart of a mammalian 5' to 3'-exonuclease required for lagging strand DNA synthesis in reconstituted systems. *J. Biol. Chem.* 270: 4193-4196.
6. Hiraoka, L.R., et al. 1995. Sequence of human FEN-1, a structure-specific endonuclease and chromosomal localization of the gene (FEN1) in mouse and human. *Genomics* 25: 220-225.
7. Hosfield, D.J., et al. 1998. Structure of the DNA repair and replication endonuclease and exonuclease FEN-1: coupling DNA and PCNA binding to FEN-1 activity. *Cell* 95: 135-146.

CHROMOSOMAL LOCATION

Genetic locus: Fen1 (mouse) mapping to 19 A.

PRODUCT

FEN-1 (m): 293T Lysate represents a lysate of mouse FEN-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

FEN-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive FEN-1 antibodies. Recommended use: 10-20 µl per lane.

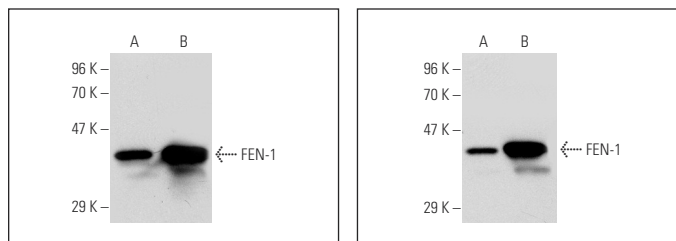
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

FEN-1 (4E7): sc-56675 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse FEN-1 expression in FEN-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

DATA



FEN-1 (4E7): sc-56675. Western blot analysis of FEN-1 expression in non-transfected: sc-117752 (A) and mouse FEN-1 transfected: sc-120234 (B) 293T whole cell lysates.

FEN-1 (B-4): sc-28355. Western blot analysis of FEN-1 expression in non-transfected: sc-117752 (A) and mouse FEN-1 transfected: sc-120234 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.