

Exo1 (h): 293T Lysate: sc-171270

BACKGROUND

Comparative evaluation of the expression patterns of the human and mouse genes, combined with previous biochemical and yeast genetic studies, indicate that the Exo1 (Exonuclease I) proteins are important contributors to chromosome processing during mammalian DNA repair and recombination. In mice, the Exo1 gene maps to distal chromosome 1, consistent with the recent mapping of the orthologous human HEX1/Exo1 gene to chromosome 1q43. Exo1 is expressed prominently in testis, an area of active homologous recombination, and spleen, a prominent lymphoid tissue. In both mammalian and yeast systems, Exo1 is a 5'-3' double stranded DNA exonuclease that has previously been implicated in DNA mismatch repair (MMR). The MMR system ensures genome integrity by removing mispaired and unpaired bases that originate during replication. In humans, Exo1 interacts with MSH2 and MLH1 and has been proposed to be a redundant exonuclease in MMR. In both mammalian and yeast systems, Exo1 plays a structural role in MMR and stabilizes multiprotein complexes containing a number of MMR proteins.

REFERENCES

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2. Kirkpatrick, D.T., et al. 2000. Decreased meiotic intergenic recombination and increased meiosis I non-disjunction in Exo1 mutants of *Saccharomyces cerevisiae*. *Genetics* 156: 1549-1557.
3. Tran, P.T., et al. 2001. Interactions of Exo1p with components of MutL α in *Saccharomyces cerevisiae*. *Proc. Natl. Acad. Sci. USA* 98: 9760-9765.
4. Mansour, A.A., et al. 2001. Control of GT repeat stability in *Schizosaccharomyces pombe* by mismatch repair factors. *Genetics* 158: 77-85.
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7. Barber, L.J., et al. 2005. DNA interstrand cross-link repair in the *Saccharomyces cerevisiae* cell cycle: overlapping roles for PSO2 (SNM1) with MutS factors and Exo1 during S phase. *Mol. Cell. Biol.* 25: 2297-2309.
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CHROMOSOMAL LOCATION

Genetic locus: EXO1 (human) mapping to 1q43.

PRODUCT

Exo1 (h): 293T Lysate represents a lysate of human Exo1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

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.

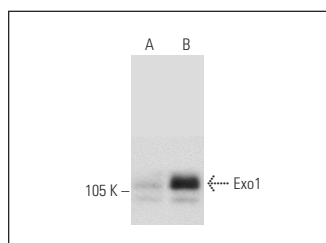
APPLICATIONS

Exo1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Exo1 antibodies. Recommended use: 10-20 μ l per lane.

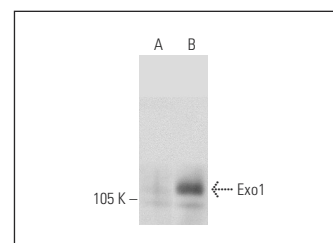
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Exo1 (266): sc-56092 is recommended as a positive control antibody for Western Blot analysis of enhanced human Exo1 expression in Exo1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



Exo1 (266): sc-56092. Western blot analysis of Exo1 expression in non-transfected: sc-117752 (A) and human Exo1 transfected: sc-171270 (B) 293T whole cell lysates.



Exo1 (SPM394): sc-56387. Western blot analysis of Exo1 expression in non-transfected: sc-117752 (A) and human Exo1 transfected: sc-171270 (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.