

Exo1 (H-300): sc-33194

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

1. Lee, B.I., et al. 1999. Expression specificity of the mouse exonuclease 1 (mExo1) gene. *Nucleic Acids Res.* 27: 4114-4120.
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.

CHROMOSOMAL LOCATION

Genetic locus: EXO1 (human) mapping to 1q43; Exo1 (mouse) mapping to 1 H4.

SOURCE

Exo1 (H-300) is a rabbit polyclonal antibody raised against amino acids 11-310 mapping near the N-terminus of Exo1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Exo1 (H-300) is recommended for detection of Exo1a and Exo1b of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Exo1 (H-300) is also recommended for detection of Exo1a and Exo1b in additional species, including equine, canine and bovine. Suitable for use as control antibody for Exo1 siRNA (h): sc-44880, Exo1 siRNA (m): sc-44881, Exo1 shRNA Plasmid (h): sc-44880-SH, Exo1 shRNA Plasmid (m): sc-44881-SH, Exo1 shRNA (h) Lentiviral Particles: sc-44880-V and Exo1 shRNA (m) Lentiviral Particles: sc-44881-V.

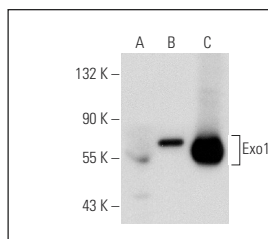
Molecular Weight of Exo1: 92 kDa.

Positive Controls: Exo1 (h): 293T Lysate: sc-171270, rat testis extract: sc-2400 or mouse testis extract: sc-2405.

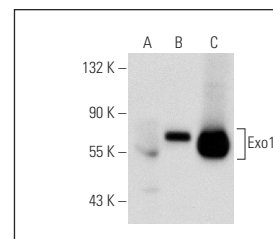
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Exo1 (H-300): sc-33194. Western blot analysis of Exo1 expression in non-transfected: sc-117752 (A) and human Exo1 transfected: sc-171270 (B) 293T whole cell lysates and mouse testis tissue extract (C).



Exo1 (H-300): sc-33194. Western blot analysis of Exo1 expression in non-transfected: sc-117752 (A) and human Exo1 transfected: sc-172184 (B) 293T whole cell lysates and mouse testis tissue extract (C).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **Exo1 (SPM394): sc-56387**, our highly recommended monoclonal alternative to Exo1 (H-300).