

FOXM1 (h2): 293T Lysate: sc-113096

BACKGROUND

The Fox family of transcription factors is a large group of proteins that share a common DNA binding domain termed a winged-helix or forkhead domain. FOXM1, also known as FKHL16, MPP2 or TRIDENT, is primarily expressed in proliferating cells. The gene encoding human FOXM1 maps to chromosome 12p13.33. The transcription element that restricts FOXM1 expression to proliferating cells is located 300 bp upstream of the start codon. FOXM1 is most abundant in thymus, testis, small intestine and colon. Alternative splicing generates FOXM1A and FOXM1B isoforms that contain PEST regions involved in rapid protein degradation. A decrease in FOXM1 expression is associated with age-related defects in cellular proliferation. Conversely, an increase in FOXM1B expression in the livers of older transgenic mice restore hepatocyte DNA replication rates to the higher rate present in young livers. FOXM1B activates the transcription of cyclin B1, cyclin D1 and Cdc25B.

REFERENCES

1. Ye, H., et al. 1997. Hepatocyte nuclear factor 3/forkhead homolog 11 is expressed in proliferating epithelial and mesenchymal cells of embryonic and adult tissues. *Mol. Cell. Biol.* 17: 1626-1641.
2. Korver, W., et al. 1997. The human Trident/HFH-11/FKHL16 gene: structure, localization and promoter characterization. *Genomics* 46: 435-442.
3. Yao, K.M., et al. 1997. Molecular analysis of a novel winged-helix protein, WIN. Expression pattern, DNA binding property and alternative splicing within the DNA binding domain. *J. Biol. Chem.* 272: 19827-19836.
4. Ly, D.H., et al. 2000. Mitotic misregulation and human aging. *Science* 287: 2486-2492.
5. Wang, X., et al. 2001. Increased levels of forkhead box M1B transcription factor in transgenic mouse hepatocytes prevent age-related proliferation defects in regenerating liver. *Proc. Natl. Acad. Sci. USA* 98: 11468-11473.
6. Wang, X., et al. 2002. The forkhead box M1B transcription factor is essential for hepatocyte DNA replication and mitosis during mouse liver regeneration. *Proc. Natl. Acad. Sci. USA* 99: 16881-16886.

CHROMOSOMAL LOCATION

Genetic locus: FOXM1 (human) mapping to 12p13.33.

PRODUCT

FOXM1 (h2): 293T Lysate represents a lysate of human FOXM1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

FOXM1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive FOXM1 antibodies. Recommended use: 10-20 µl per lane.

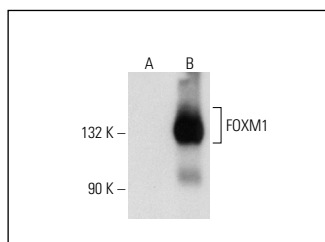
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

FOXM1 (D-4): sc-166709 is recommended as a positive control antibody for Western Blot analysis of enhanced human FOXM1 expression in FOXM1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

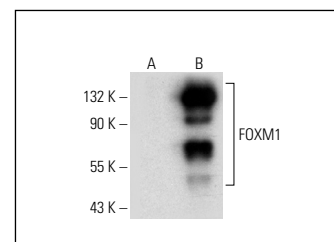
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



FOXM1 (D-4): sc-166709. Western blot analysis of FOXM1 expression in non-transfected: sc-117752 (A) and human FOXM1 transfected: sc-113096 (B) 293T whole cell lysates.



FOXM1 (E-10): sc-376621. Western blot analysis of FOXM1 expression in non-transfected: sc-117752 (A) and human FOXM1 transfected: sc-113096 (B) 293T whole cell lysates.

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.

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.