

Six1 (m): 293T Lysate: sc-123562

BACKGROUND

The Six proteins (sine oculis) are a family of homeodomain transcription factors that share a conserved DNA binding domain. Six2, Six4 (AREC3) and Six5 bind to the same DNA sequence, indicating that they may regulate the same target genes. Six1 and Six4 are both capable of transactivating MEF3 site containing reporter genes, such as myogenin. It has been demonstrated that alterations to homeobox-containing genes may result in cancer. Six1 expression has been shown to be absent or low in normal adult tissues, although it is expressed in several tumor types, including breast carcinoma. Six1 overexpression has been shown to abrogate the G₂ cell cycle checkpoint.

REFERENCES

1. Cillo, C. 1994. HOX genes in human cancers. *Invasion Metastasis* 14: 38-49.
2. Paules, R.S., et al. 1995. Defective G₂ checkpoint function in cells from individuals with familial cancer syndromes. *Cancer Res.* 55: 1763-1773.
3. Kawakami, K., et al. 1996. Identification and expression of six family genes in mouse retina. *FEBS Lett.* 393: 259-263.
4. Davey, S., et al. 1998. Fission yeast rad12⁺ regulates cell cycle checkpoint control and is homologous to the Bloom's syndrome disease gene. *Mol. Cell. Biol.* 18: 2721-2728.
5. Ford, H.L., et al. 1998. Abrogation of the G₂ cell cycle checkpoint associated with overexpression of HSIX1: a possible mechanism of breast carcinogenesis. *Proc. Natl. Acad. Sci. USA* 95: 12608-12613.
6. Spitz, F., et al. 1998. Expression of myogenin during embryogenesis is controlled by Six/sine oculis homeoproteins through a conserved MEF3 binding site. *Proc. Natl. Acad. Sci. USA* 95: 14220-14225.

CHROMOSOMAL LOCATION

Genetic locus: Six1 (mouse) mapping to 12 C3.

PRODUCT

Six1 (m): 293T Lysate represents a lysate of mouse Six1 transfected 293T cells and is provided as 100 µg protein in 200 µl 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

Six1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Six1 antibodies. Recommended use: 10-20 µl per lane.

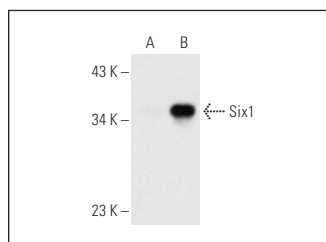
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Six1 (B-8): sc-514441 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Six1 expression in Six1 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



Six1 (B-8): sc-514441. Western blot analysis of Six1 expression in non-transfected: sc-117752 (A) and mouse Six1 transfected: sc-123562 (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.