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



The Power to Question

#### **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  $G_2$  cell cycle checkpoint.

#### **REFERENCES**

- Cillo, C. 1994. HOX genes in human cancers. Invasion Metastasis 14: 38-49.
- Paules, R.S., et al. 1995. Defective G<sub>2</sub> 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 Letts. 393: 259-263.
- 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  $G_2$  cell cycle checkpoint associated with overexpression of HSIX1: a possible mechanism of breast carcinogenesis. Proc. Natl. Acad. Sci. USA 95: 12608-12613.
- 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.

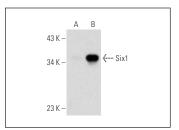
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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

#### **RESEARCH USE**

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

#### **PROTOCOLS**

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