# SANTA CRUZ BIOTECHNOLOGY, INC.

# Sp6 (J-25): sc-134025



## BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. Sp6, also known as EPFN, EPIPROFIN or KLF14, is a 376 amino acid protein that localizes to the nucleus and contains three  $C_2H_2$ -type zinc-fingers. Expressed ubiquitously with higher expression in developing teeth, hair follicles and limb buds, Sp6 functions to bind GC-rich sequences and related GT and CACCC boxes, thereby promoting cellular proliferation. Human Sp6 shares 96% sequence homology with its mouse counterpart, suggesting a conserved role between species. The gene encoding Sp6 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

#### REFERENCES

- Scohy, S., Gabant, P., Van Reeth, T., Hertveldt, V., Drèze, P.L., Van Vooren, P., Rivière, M., Szpirer, J. and Szpirer, C. 2000. Identification of KLF13 and KLF14 (Sp6), novel members of the SP/XKLF transcription factor family. Genomics 70: 93-101.
- 2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608613. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Nakamura, T., Unda, F., de-Vega, S., Vilaxa, A., Fukumoto, S., Yamada, K.M. and Yamada, Y. 2004. The Krüppel-like factor epiprofin is expressed by epithelium of developing teeth, hair follicles and limb buds, and promotes cell proliferation. J. Biol. Chem. 279: 626-634.
- Hertveldt, V., De Mees, C., Scohy, S., Van Vooren, P., Szpirer, J. and Szpirer, C. 2007. The Sp6 locus uses several promoters and generates sense and antisense transcripts. Biochimie 89: 1381-1387.
- Hertveldt, V., Louryan, S., van Reeth, T., Drèze, P., van Vooren, P., Szpirer, J. and Szpirer, C. 2008. The development of several organs and appendages is impaired in mice lacking Sp6. Dev. Dyn. 237: 883-892.
- Nakamura, T., de Vega, S., Fukumoto, S., Jimenez, L., Unda, F. and Yamada, Y. 2008. Transcription factor epiprofin is essential for tooth morphogenesis by regulating epithelial cell fate and tooth number. J. Biol. Chem. 283: 4825-4833.

#### CHROMOSOMAL LOCATION

Genetic locus: SP6 (human) mapping to 17q21.32; Sp6 (mouse) mapping to 11 D.

## SOURCE

Sp6 (J-25) is an affinity purified rabbit polyclonal antibody raised against synthetic Sp6 peptide of human origin.

## **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### PRODUCT

Each vial contains 50  $\mu g$  lgG in 500  $\mu l$  PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## **APPLICATIONS**

Sp6 (J-25) is recommended for detection of Sp6 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Sp6 siRNA (h): sc-93716, Sp6 siRNA (m): sc-153691, Sp6 shRNA Plasmid (h): sc-93716-SH, Sp6 shRNA Plasmid (m): sc-153691-SH, Sp6 shRNA (h) Lentiviral Particles: sc-93716-V and Sp6 shRNA (m) Lentiviral Particles: sc-153691-V.

Molecular Weight of Sp6: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## **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).





Sp6 (J-25): sc-134025. Western blot analysis of Sp6 expression in Jurkat whole cell lysate.

## **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.