



ELP4 (W-21): sc-133546

BACKGROUND

In *Saccharomyces cerevisiae*, the hyperphosphorylated form of RNA polymerase II (RNAP II) mediates transcription elongation and associates with the elongator complex, which contains six subunits. The elongator complex can be separated into two subcomplexes; one consisting of Elp1, Elp2 and Elp3, and the other consisting of Elp4, Elp5 and Elp6. The elongator complex acetylates both core histones and nucleosomal substrates, and directs its activity specifically towards the N-terminal tails of Histone H3 and Histone H4. An analogous complex exists in mammals and contains a variety of proteins that are functional homologs of their yeast counterparts. ELP4 (elongation protein 4), also known as PAX6NEB, is a 424 amino acid protein that localizes to both the cytoplasm and the nucleus and exists as a component of the elongator complex. Widely expressed as multiple alternatively spliced isoforms, ELP4 is involved in transcriptional regulation and may play a role in chromatin remodeling.

REFERENCES

1. Winkler, G.S., et al. 2001. RNA polymerase II elongator holoenzyme is composed of two discrete subcomplexes. *J. Biol. Chem.* 276: 32743-32749.
2. Hawkes, N.A., et al. 2002. Purification and characterization of the human elongator complex. *J. Biol. Chem.* 277: 3047-3052.
3. Kleinjan, D.A., et al. 2002. Characterization of a novel gene adjacent to PAX6, revealing synteny conservation with functional significance. *Mamm. Genome* 13: 102-107.
4. Kim, J.H., et al. 2002. Human elongator facilitates RNA polymerase II transcription through chromatin. *Proc. Natl. Acad. Sci. USA* 99: 1241-1246.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606985. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Li, F., et al. 2004. The ELP4 subunit of human elongator complex partially complements the growth defects of yeast ELP4 deletion strain. *Yi Chuan Xue Bao* 31: 668-674.
7. Nelissen, H., et al. 2005. The elongata mutants identify a functional elongator complex in plants with a role in cell proliferation during organ growth. *Proc. Natl. Acad. Sci. USA* 102: 7754-7759.
8. Srokowski, E.M. and Woodhouse, K.A. 2008. Development and characterization of novel cross-linked bio-elastomeric materials. *J. Biomater. Sci. Polym. Ed.* 19: 785-799.
9. Strug, L.J., et al. 2009. Centrotemporal sharp wave EEG trait in rolandic epilepsy maps to elongator protein complex 4 (ELP4). *Eur. J. Hum. Genet.* E-published.

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.

CHROMOSOMAL LOCATION

Genetic locus: Elp4 (mouse) mapping to 2 E3.

SOURCE

ELP4 (W-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic ELP4 peptide of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

ELP4 (W-21) is recommended for detection of ELP4 of mouse 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ELP4 siRNA (m): sc-144636, ELP4 shRNA Plasmid (m): sc-144636-SH and ELP4 shRNA (m) Lentiviral Particles: sc-144636-V.

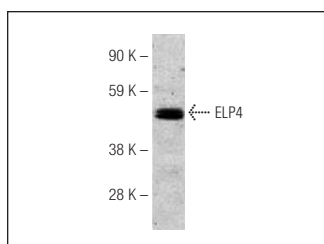
Molecular Weight of ELP4: 47 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

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).

DATA



ELP4 (W-21): sc-133546. Western blot analysis of ELP4 expression in NIH/3T3 whole cell lysate.

PROTOCOLS

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