

ELYS (T-18): sc-68970

BACKGROUND

ELYS (AT-hook-containing transcription factor 1) is a protein of the nuclear matrix that contains one AT hook DNA-binding domain. ELYS is a dual nucleoporin/kinetochore protein required for nuclear pore assembly and proper cell division. Nuclear pores span the nuclear envelope and act as gated aqueous channels to regulate the transport of macromolecules between the nucleus and cytoplasm, from individual proteins and RNAs to entire viral genomes. The AT hook near the C-terminus of likely indicates ELYS can function as a transcription factor which may play a specific role in hematopoietic tissues. It also may play a role in early embryo development, as ELYS is critical for the survival of inner cells of the blastocyst.

REFERENCES

- Kimura, N., Takizawa, M., Okita, K., Natori, O., Igarashi, K., Ueno, M., Nakashima, K., Nobuhisa, I. and Taga, T. 2002. Identification of a novel transcription factor, ELYS, expressed predominantly in mouse foetal haematopoietic tissues. *Genes Cells*. 7: 435-446.
- Okita, K., Nobuhisa, I., Takizawa, M., Ueno, M., Kimura, N. and Taga, T. 2003. Genomic organization and characterization of the mouse ELYS gene. *Biochem. Biophys. Res. Commun.* 305: 327-332.
- Okita, K., Kiyonari, H., Nobuhisa, I., Kimura, N., Aizawa, S. and Taga, T. 2004. Targeted disruption of the mouse ELYS gene results in embryonic death at peri-implantation development. *Genes Cells*. 9: 1083-1091.
- Rasala, B.A., Orjalo, A.V., Shen, Z., Briggs, S. and Forbes, D.J. 2006. ELYS is a dual nucleoporin/kinetochore protein required for nuclear pore assembly and proper cell division. *Proc. Natl. Acad. Sci. USA* 103: 17801-17806.
- Franz, C., Walczak, R., Yavuz, S., Santarella, R., Gentzel, M., Askjaer, P., Galy, V., Hetzer, M., Mattaj, I.W. and Antonin, W. 2007. MEL-28/ELYS is required for the recruitment of nucleoporins to chromatin and postmitotic nuclear pore complex assembly. *EMBO Rep*. 8: 165-172.
- Gillespie, P.J., Khoudoli, G.A., Stewart, G., Swedlow, J.R. and Blow, J.J. 2007. ELYS/MEL-chromatin association coordinates nuclear pore complex assembly and replication licensing. *Curr. Biol*. 17: 1657-1662.
- Resendes, K.K., Rasala, B.A. and Forbes, D.J. 2008. Centrin 2 localizes to the vertebrate nuclear pore and plays a role in mRNA and protein export. *Mol. Cell. Biol*. 28: 1755-1769.

CHROMOSOMAL LOCATION

Genetic locus: AHCTF1 (human) mapping to 1q44; Ahctf1 (mouse) mapping to 1 H4.

SOURCE

ELYS (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ELYS of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68970 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-68970 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ELYS (T-18) is recommended for detection of ELYS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ELYS (T-18) is also recommended for detection of ELYS in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for ELYS siRNA (h): sc-77266, ELYS siRNA (m): sc-77267, ELYS shRNA Plasmid (h): sc-77266-SH, ELYS shRNA Plasmid (m): sc-77267-SH, ELYS shRNA (h) Lentiviral Particles: sc-77266-V and ELYS shRNA (m) Lentiviral Particles: sc-77267-V.

ELYS (T-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ELYS: 253 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **ELYS (2318C2a): sc-81265**, our highly recommended monoclonal alternative to ELYS (T-18).