

ELYS (2318C2a): sc-81265

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

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- 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.

CHROMOSOMAL LOCATION

Genetic locus: AHCTF1 (human) mapping to 1q44.

SOURCE

ELYS (2318C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of ELYS of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

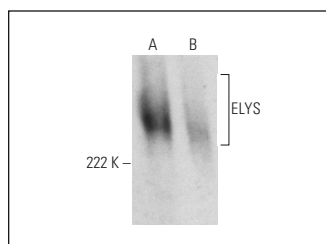
ELYS (2318C2a) is recommended for detection of ELYS of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

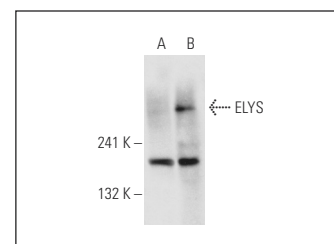
Molecular Weight of ELYS: 253 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or NCI-H226 whole cell lysate: sc-364256.

DATA



ELYS (2318C2a): sc-81265. Western blot analysis of ELYS expression in HeLa nuclear extract (A) and NCI-H226 whole cell lysate (B).



ELYS (2318C2a): sc-81265. Western blot analysis of ELYS expression in non-transfected: sc-117752 (A) and mouse ELYS transfected: sc-120015 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Wesley, C.C. and Levy, D.L. 2023. Differentiation-dependent changes in Lamin B1 dynamics and Lamin B receptor localization. *Mol. Biol. Cell* 34: ar10.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.