SANTA CRUZ BIOTECHNOLOGY, INC.

EF-1 α1 (h11): 293T Lysate: sc-117370

BACKGROUND

The elongation factor-1 complex is composed of two subunits, EF-1 α1 (elongation factor 1-α 1) and EF-1 α2 (elongation factor 1-α 2), and is responsible for the delivery of aminoacyl tRNAs to the ribosome. EF-1 α1 is expressed predominately in brain, placenta, lung, liver, kidney and pancreas, while EF-1 α2 is highly expressed in heart, brain and skeletal muscle. Both EF-1 α1 and α2 localize to the nucleus and belong to the GTP-binding elongation factor family. The gene encoding EF-1 α2, which maps to human chromosome 20q13.3, may play a role in the development of ovarian cancer, while the EF-1 α1 gene, mapping to chromosome 6q13, is commonly present as an autoantigen in patients with Felty syndrome. Felty syndrome is a disorder characterized by rheumatoid arthritis, a swollen spleen, decreased white blood cell count, and increased susceptibility to infection.

REFERENCES

1. Nyborg, J. 1998. Possible evolution of factors involved in protein biosynthesis. Acta Biochim. Pol. 45: 883-894.
2. Agrawal, R.K., Penczek, P., Grassucci, R.A. and Frank, J. 1998. Visualization of elongation factor G on the *Escherichia coli* 70S ribosome: the mechanism of translocation. Proc. Natl. Acad. Sci. USA 95: 6134-6138.
3. Kraal, B., Lippmann, C. and Kleanthous, C. 1999. Translational regulation by modifications of the elongation factor Tu. Folia Microbiol. 44: 131-141.
4. Martemyanov, K.A. and Gudkov, A.T. 2000. Domain III of elongation factor G from *Thermus thermophilus* is essential for induction of GTP hydrolysis on the ribosome. J. Biol. Chem. 275: 35820-35824.
5. Rodnina, M.V., Stark, H., Savelsbergh, A., Wieden, H.J., Mohr, D., Matassova, N.B., Peske, F., Daviter, T., Gualerzi, C.O. and Wintermeyer, W. 2000. GTPases mechanisms and functions of translation factors on the ribosome. Biol. Chem. 381: 377-387.

CHROMOSOMAL LOCATION

Genetic locus: EEF1A1 (human) mapping to 6q13.

PRODUCT

EF-1 α1 (h11): 293T Lysate represents a lysate of human EF-1 α1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

EF-1 α1 (h11): 293T Lysate is suitable as a Western Blotting positive control for human reactive EF-1 α1 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.

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.

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.