



eIF1AY (h): 293 Lysate: sc-171359

BACKGROUND

Ribosomes, made of ribonucleoprotein, are the cellular machinery used to catalyze assembly of amino acids into polypeptide chains translated from a template messenger RNA sequence. In eukaryotes, the ribosome consists of a 40S (small) and a 60S (large) subunit. Protein synthesis initiates through the binding of mRNA to the 40S subunit followed by an aminoacylated tRNA and the 60S subunit. The initiating charged tRNA, which base pairs with an AUG start codon on the mRNA, is bound to the essential amino acid methionine (Met). eIF1AY (eukaryotic translation initiation factor 1A, Y-chromosomal), also known as eIF-1A Y isoform and eIF-4C, is a 144 amino acid protein that is ubiquitously expressed and is thought to enhance protein biosynthesis. Ribosomal subunit dissociation and binding of the 40S subunit to Met-tRNA is assisted by eIF1AY. eIF1AY, a cytoplasmic protein, is encoded by a gene in the nonrecombining region of the Y chromosome (NRY) in human and on chromosome 18 in mouse and rat where it is known as eIF1A. eIF-1AX, a related protein known as eIF1AY in mouse, is a 144 amino acid protein encoded by the X chromosome in human, mouse and rat. eIF1AY and eIF1AX contain a single S1-like domain.

REFERENCES

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2. Krausz, C., Bussani-Mastellone, C., Granchi, S., McElreavey, K., Scarselli, G. and Forti, G. 1999. Screening for microdeletions of Y chromosome genes in patients undergoing intracytoplasmic sperm injection. *Hum. Reprod.* 14: 1717-1721.
3. Lau, Y.F. and Zhang, J. 2000. Expression analysis of thirty one Y chromosome genes in human prostate cancer. *Mol. Carcinog.* 27: 308-321.
4. Kleiman, S.E., Yogev, L., Hauser, R., Botchan, A., Maymon, B.B., Paz, G. and Yavetz, H. 2007. Expression profile of AZF genes in testicular biopsies of azoospermic men. *Hum. Reprod.* 22: 151-158.

CHROMOSOMAL LOCATION

Genetic locus: EIF1AY (human) mapping to Yq11.223.

PRODUCT

eIF1AY (h): 293 Lysate represents a lysate of human eIF1AY transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

eIF1AY (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive eIF1AY antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 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.