



eIF4B (h): 293T Lysate: sc-111557

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. These interactions are facilitated, in part, by the eukaryotic initiation factor 4 family (eIF4) of proteins that are involved in the early initiation of protein synthesis. eIF4B (eukaryotic translation initiation factor 4B) is a 611 amino acid protein that contains one RNA recognition motif and belongs to the eIF4 protein family. Required for proper mRNA/ribosome binding, eIF4B associates with other eIF4 proteins, such as eIF4A, and promotes the ATP-dependent unwinding activity of select eukaryotic initiation factors. The gene encoding eIF4B maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

1. Howe, J.G. and Hershey, J.W. 1984. Translational initiation factor and ribosome association with the cytoskeletal framework fraction from HeLa cells. *Cell* 37: 85-93.
2. Milburn, S.C., et al. 1990. Cloning and expression of eukaryotic initiation factor 4B cDNA: sequence determination identifies a common RNA recognition motif. *EMBO J.* 9: 2783-2790.
3. Naranda, T., et al. 1994. Two structural domains of initiation factor eIF4B are involved in binding to RNA. *J. Biol. Chem.* 269: 14465-14472.
4. Methot, N., et al. 1994. The translation initiation factor eIF4B contains an RNA-binding region that is distinct and independent from its ribonucleoprotein consensus sequence. *Mol. Cell. Biol.* 14: 2307-2316.
5. Methot, N., et al. 1996. A region rich in aspartic acid, arginine, tyrosine, and glycine (DRYG) mediates eukaryotic initiation factor 4B (eIF4B) self-association and interaction with eIF3. *Mol. Cell. Biol.* 16: 5328-5334.
6. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 603928. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Bushell, M., et al. 2001. Disruption of the interaction of mammalian protein synthesis eukaryotic initiation factor 4B with the poly(A)-binding protein by caspase- and viral protease-mediated cleavages. *J. Biol. Chem.* 276: 23922-23928.
8. Fleming, K., et al. 2003. Solution structure and RNA interactions of the RNA recognition motif from eukaryotic translation initiation factor 4B. *Biochemistry* 42: 8966-8975.
9. Rozovsky, N., et al. 2008. Interactions between eIF4A1 and its accessory factors eIF4B and eIF4H. *RNA* 14: 2136-2148.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: EIF4B (human) mapping to 12q13.13.

PRODUCT

eIF4B (h): 293T Lysate represents a lysate of human eIF4B transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

eIF4B (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive eIF4B 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.