

DnaJA4 (m): 293T Lysate: sc-119795

BACKGROUND

The DnaJ family is one of the largest of all the chaperone families and has evolved with diverse cellular localization and functions. The presence of the J domain defines a protein as a member of the DnaJ family. DnaJ heat shock induced proteins are from the bacterium *Escherichia coli* and are under the control of the *htpR* regulatory protein. The DnaJ proteins play a critical role in the HSP 70 chaperone machine by interacting with HSP 70 to stimulate ATP hydrolysis. The proteins contain cysteine rich regions that are composed of zinc fingers that form a peptide binding domain responsible for the chaperone function. DnaJ proteins are important mediators of proteolysis and are involved in the regulation of protein degradation, exocytosis and endocytosis. DnaJA4 (DnaJ homolog subfamily A member 4) is a SREBP-regulated chaperone that is thought to regulate the cholesterol biosynthesis pathway.

REFERENCES

1. Saito, H. and Uchida, H. 1978. Organization and expression of the DnaJ and DnaK genes of *Escherichia coli* K12. *Mol. Gen. Genet.* 164: 1-8.
2. Georgopoulos, C.P., Lundquist-Heil, A., Yochem, J. and Feiss, M. 1980. Identification of the *E. coli* DnaJ gene product. *Mol. Gen. Genet.* 178: 583-588.
3. Suh, W.C., Burkholder, W.F., Lu, C.Z., Zhao, X., Gottesman, M.E. and Gross, C.A. 1998. Interaction of the Hsp70 molecular chaperone, DnaK, with its cochaperone DnaJ. *Proc. Natl. Acad. Sci. USA* 95: 15223-15228.
4. Tomoyasu, T., Ogura, T., Tatsuta, T. and Bukau, B. 1998. Levels of DnaK and DnaJ provide tight control of heat shock gene expression and protein repair in *Escherichia coli*. *Mol. Microbiol.* 30: 567-581.
5. Stewart, G.R., Robertson, B.D. and Young, D.B. 2004. Analysis of the function of mycobacterial DnaJ proteins by overexpression and microarray profiling. *Tuberculosis* 84: 180-187.
6. Shi, Y.Y., Hong, X.G. and Wang, C.C. 2005. The C-terminal (331-376) sequence of *Escherichia coli* DnaJ is essential for dimerization and chaperone activity: a small angle X-ray scattering study in solution. *J. Biol. Chem.* 280: 22761-22768.
7. Robichon, C., Varret, M., Le Liepvre, X., Lasnier, F., Hajduch, E., Ferré, P. and Dugail, I. 2006. DnaJA4 is a SREBP-regulated chaperone involved in the cholesterol biosynthesis pathway. *Biochim. Biophys. Acta* 1761: 1107-1113.
8. Genevaux, P., Georgopoulos, C. and Kelley, W.L. 2007. The Hsp70 chaperone machines of *Escherichia coli*: a paradigm for the repartition of chaperone functions. *Mol. Microbiol.* 66: 840-857.
9. Acebrón, S.P., Fernández-Sáiz, V., Taneva, S.G., Moro, F. and Muga, A. 2008. DnaJ recruits DnaK to protein aggregates. *J. Biol. Chem.* 283: 1381-1390.

CHROMOSOMAL LOCATION

Genetic locus: DnaJA4 (mouse) mapping to 9 A5.3.

PRODUCT

DnaJA4 (m): 293T Lysate represents a lysate of mouse DnaJA4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

DnaJA4 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive DnaJA4 antibodies. Recommended use: 10-20 µl per lane.

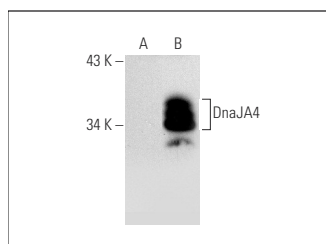
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

DnaJA4 (LL2): sc-100714 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse DnaJA4 expression in DnaJA4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



DnaJA4 (LL2): sc-100714. Western blot analysis of DnaJA4 expression in non-transfected: sc-117752 (A) and mouse DnaJA4 transfected: sc-119795 (B) 293T whole cell lysates.

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.