DNAJC21 (h): 293T Lysate: sc-128479



The Power to Question

BACKGROUND

With the presence of the J domain defining a protein as a member, the DnaJ family has evolved with diverse cellular localization and functions and is one of the largest chaperone families. DnaJ heat-shock-induced proteins are derived from the bacterium $Escherichia\ coli$ and are controlled by the htpR regulatory protein. DnaJ proteins play a critical role in the HSP 70 chaperone machine by interacting with HSP 70 to stimulate ATP hydrolysis. Members of this family contain cysteine-rich regions composed of zinc fingers that form a peptide-binding domain responsible for chaperone function. DnaJ proteins are important mediators of proteolysis and are involved in the regulation of protein degradation, exocytosis and endocytosis. DNAJC21 (DnaJ homolog subfamily C member 21), also known as DNAJA5 or JJJ1, is a 531 amino acid protein that contains 2 C_2H_2 -type zinc fingers and one J domain. Expressed in placenta, pancreas, kidney and brain, DNAJC21 may be a co-chaperone for HSP 70.

REFERENCES

- 1. Saito, H., et al. 1978. Organization and expression of the dnaJ and dnaK genes of *Escherichia coli* K12. Mol. Gen. Genet. 164: 1-8.
- 2. Georgopoulos, C.P., et al. 1980. Identification of the *E. coli* dnaJ gene product. Mol. Gen. Genet. 178: 583-588.
- 3. Suh, W.C., et al. 1998. Interaction of the Hsp70 molecular chaperone, DnaK, with its cochaperone DnaJ. Proc. Natl. Acad. Sci. USA 95: 15223-15228.
- Tomoyasu, T., et al. 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.
- Chen, J., et al. 2004. Cloning and characterization of a novel human cDNA encoding a J-domain protein (DNAJA5) from the fetal brain. Int. J. Mol. Med. 13: 735-740.
- Stewart, G.R., et al. 2004. Analysis of the function of mycobacterial DnaJ proteins by overexpression and microarray profiling. Tuberculosis 84: 180-187.
- 7. Shi, Y.Y., et al. 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.
- Robichon, C., et al. 2006. DnaJA4 is a SREBP-regulated chaperone involved in the cholesterol biosynthesis pathway. Biochim. Biophys. Acta 1761: 1107-1113.
- 9. Acebrón, S.P., et al. 2008. DnaJ recruits DnaK to protein aggregates. J. Biol. Chem. 283: 1381-1390.

CHROMOSOMAL LOCATION

Genetic locus: DNAJC21 (human) mapping to 5p13.2.

PRODUCT

DNAJC21 (h): 293T Lysate represents a lysate of human DNAJC21 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

DNAJC21 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive DNAJC21 antibodies. Recommended use: 10-20 μ l 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.

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