# DnaJC8 (N-14): sc-104217



The Power to Question

### **BACKGROUND**

The DnaJ family is one of the largest of all chaperone families and has evolved with diverse cellular localization and functions. Presence of a J domain defines a protein as a member of the DnaJ family. DnaJ heat shock induced proteins are derived from *Escherichia coli* and are under the control of 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. DnaJ proteins contain cysteine rich regions that are composed of zinc fingers, which 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. DnaJC8 (DnaJ (Hsp 40) homolog, subfamily C, member 8), also known as SPF31 or HSPC331, is a 253 amino acid protein that is suggested to have a potential role as a cochaperone in RNA processing-related processes.

# **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.
- 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 HSP 70 molecular chaperone, DnaK, with its cochaperone DnaJ. Proc. Natl. Acad. Sci. USA 95: 15223-15228.
- 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.
- 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 (Edinb). 84: 180-187.
- 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.
- Robichon, C., Varret, M., Le Liepvre, X., Lasnier, F., Hajduch, E., Ferre, P. and Dugail, I. 2006. DnaJA4 is a SREBP-regulated chaperone involved in the cholesterol biosynthesis pathway. Biochim. Biophys. Acta 1761: 1107-1113.
- 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.
- 9. Zhong, X.Y., Ding, J.H., Adams, J.A., Ghosh, G. and Fu, X.D. 2009. Regulation of SR protein phosphorylation and alternative splicing by modulating kinetic interactions of SRPK1 with molecular chaperones. Genes Dev. 23: 482-495.

### CHROMOSOMAL LOCATION

Genetic locus: DNAJC8 (human) mapping to 1p35.3; Dnajc8 (mouse) mapping to 4 D2.3.

## **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **SOURCE**

DnaJC8 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DnaJC8 of human origin.

### **PRODUCT**

Each vial contains 200  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104217 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### **APPLICATIONS**

DnaJC8 (N-14) is recommended for detection of DnaJC8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DnaJC8 siRNA (h): sc-88595, DnaJC8 siRNA (m): sc-105311, DnaJC8 shRNA Plasmid (h): sc-88595-SH, DnaJC8 shRNA Plasmid (m): sc-105311-SH, DnaJC8 shRNA (h) Lentiviral Particles: sc-88595-V and DnaJC8 shRNA (m) Lentiviral Particles: sc-105311-V.

Molecular Weight of DnaJC8: 30 kDa.

# **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### **RESEARCH USE**

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

#### **PROTOCOLS**

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

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