

DnaJC5B (N-15): sc-87089

BACKGROUND

The DnaJ family, one of the largest of all the chaperone families, 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 derived 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. Members of this family contain cysteine-rich regions that are composed of zinc fingers that form a peptide-binding domain responsible for the chaperone function. They are important mediators of proteolysis and are involved in the regulation of protein degradation, exocytosis and endocytosis. DnaJC5B (DnaJ homolog subfamily C member 5B), also designated β -cysteine string protein (β -CSP), is a 199 amino acid protein that contains one J domain and plays an important role in exocytosis. DnaJC5B is expressed in testis where it is tightly bound to lipid membranes. The palmitoylation level of DnaJC5B is thought to correlate with its targeting to specific membranes.

REFERENCES

- 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.
- 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.
- Brown, H., Larsson, O., Bränström, R., Yang, S.N., Leibiger, B., Leibiger, I., Fried, G., Moede, T., Deeney, J.T., Brown, G.R., Jacobsson, G., Rhodes, C.J., Braun, J.E., Scheller, R.H., Corkey, B.E., Berggren, P.O. and Meister, B. 1998. Cysteine string protein (CSP) is an Insulin secretory granule-associated protein regulating β -cell exocytosis. EMBO J. 17: 5048-5058.
- Boal, F., Zhang, H., Tessier, C., Scotti, P. and Lang, J. 2004. The variable C-terminus of cysteine string proteins modulates exocytosis and protein-protein interactions. Biochemistry 43: 16212-16223.
- 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.
- Boal, F., Le Pevelen, S., Cziepluch, C., Scotti, P. and Lang, J. 2007. Cysteine-string protein isoform β (Csp β) is targeted to the trans-Golgi network as a non-palmitoylated CSP in clonal β -cells. Biochim. Biophys. Acta 1773: 109-119.
- 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.
- 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: DNAJC5B (human) mapping to 8q13.1; Dnajc5b (mouse) mapping to 3 A2.

SOURCE

DnaJC5B (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DnaJC5B of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-87089 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DnaJC5B (N-15) is recommended for detection of DnaJC5B 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).

DnaJC5B (N-15) is also recommended for detection of DnaJC5B in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for DnaJC5B siRNA (h): sc-77770, DnaJC5B siRNA (m): sc-143111, DnaJC5B shRNA Plasmid (h): sc-77770-SH, DnaJC5B shRNA Plasmid (m): sc-143111-SH, DnaJC5B shRNA (h) Lentiviral Particles: sc-77770-V and DnaJC5B shRNA (m) Lentiviral Particles: sc-143111-V.

Molecular Weight of DnaJC5B: 22 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.

STORAGE

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

RESEARCH USE

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