

# DnaJB5 (SY7): sc-100712

## 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. DnaJB5 (DnaJ homolog subfamily B member 5), also known as Hsc40, is ubiquitously expressed, with highest levels in heart, followed in by skeletal muscle, spleen, liver, brain and pancreas, and very weak expression in lung and kidney.

## REFERENCES

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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 HSP 70 molecular chaperone, DnaK, with its cochaperone DnaJ. Proc. Natl. Acad. Sci. USA 95: 15223-15228.
4. 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.
5. Stewart, G.R., et al. 2004. Analysis of the function of mycobacterial DnaJ proteins by overexpression and microarray profiling. Tuberculosis 84: 180-187.
6. 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.
7. Qiu, X.B., et al. 2006. The diversity of the DnaJ/HSP 40 family, the crucial partners for HSP 70 chaperones. Cell. Mol. Life Sci. 63: 2560-2570.
8. Genevaux, P., et al. 2007. The HSP 70 chaperone machines of *Escherichia coli*: a paradigm for the repartition of chaperone functions. Mol. Microbiol. 66: 840-857.

## CHROMOSOMAL LOCATION

Genetic locus: DNAJB5 (human) mapping to 9p13.3; Dnajb5 (mouse) mapping to 4 A5.

## SOURCE

DnaJB5 (SY7) is a mouse monoclonal antibody raised against recombinant DnaJB5 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

DnaJB5 (SY7) is recommended for detection of DnaJB5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DnaJB5 siRNA (h): sc-92611, DnaJB5 siRNA (m): sc-143094, DnaJB5 shRNA Plasmid (h): sc-92611-SH, DnaJB5 shRNA Plasmid (m): sc-143094-SH, DnaJB5 shRNA (h) Lentiviral Particles: sc-92611-V and DnaJB5 shRNA (m) Lentiviral Particles: sc-143094-V.

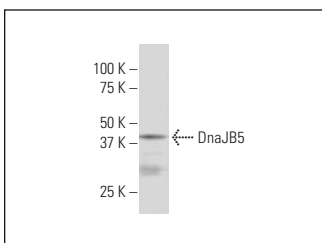
Molecular Weight of DnaJB5: 39 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



DnaJB5 (SY7): sc-100712. Western blot analysis of DnaJB5 expression in Jurkat whole cell lysate.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.