SANTA CRUZ BIOTECHNOLOGY, INC.

DnaJB14 (D-6): sc-515383

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The DnaJ family, one of the largest of all the chaperone families, has evolved with diverse cellular localization and functions. The presence of a 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. 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 chaperone function. DnaJ family members are important mediators of proteolysis and are involved in the regulation of protein degradation, exocytosis and endocytosis. DnaJB14 (DnaJ (Hsp40) homolog, subfamily B, member 14) is a 379 amino acid single-pass membrane protein containing one J domain and is thought to act as a co-chaperone. DnaJB14 exists as two alternatively spliced isoforms.

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., 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.

CHROMOSOMAL LOCATION

Genetic locus: DNAJB14 (human) mapping to 4q23; Dnajb14 (mouse) mapping to 3 G3.

SOURCE

DnaJB14 (D-6) is a mouse monoclonal antibody raised against amino acids 303-379 mapping at the C-terminus of DnaJB14 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DnaJB14 (D-6) is available conjugated to agarose (sc-515383 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515383 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515383 PE), fluorescein (sc-515383 FITC), Alexa Fluor® 488 (sc-515383 AF488), Alexa Fluor® 546 (sc-515383 AF546), Alexa Fluor® 594 (sc-515383 AF594) or Alexa Fluor® 647 (sc-515383 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515383 AF680) or Alexa Fluor® 790 (sc-515383 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

DnaJB14 (D-6) is recommended for detection of DnaJB14 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 DnaJB14 siRNA (h): sc-88854, DnaJB14 siRNA (m): sc-143091, DnaJB14 shRNA Plasmid (h): sc-88854-SH, DnaJB14 shRNA Plasmid (m): sc-143091-SH, DnaJB14 shRNA (h) Lentiviral Particles: sc-88854-V and DnaJB14 shRNA (m) Lentiviral Particles: sc-143091-V.

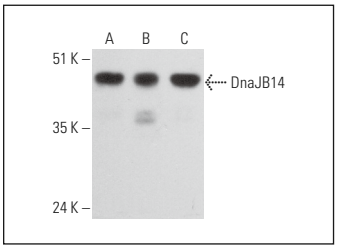
Molecular Weight of DnaJB14: 43 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, U-251-MG whole cell lysate: sc-364176 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

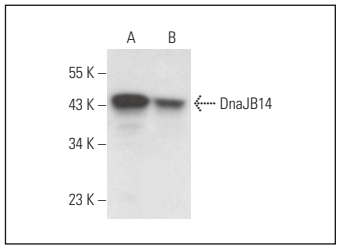
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DnaJB14 (D-6): sc-515383. Western blot analysis of DnaJB14 expression in NTERA-2 cl.D1 (**A**), HEK293 (**B**) and U-251-MG (**C**) whole cell lysates.



DnaJB14 (D-6): sc-515383. Western blot analysis of DnaJB14 expression in NTERA-2 cl.D1 (**A**) and WI-38 (**B**) whole cell lysates.

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.