



DnaJC12 (N-14): sc-104901

BACKGROUND

The DnaJ family comprises a group of chaperone proteins that contain a J domain and have diverse cellular localization and functions. DnaJ proteins play a critical role in the HSP 70 chaperone machine by interacting with HSP 70 to stimulate ATP hydrolysis and are also important mediators of proteolysis and protein degradation. DnaJC12 (DnaJ (Hsp40) homolog, subfamily C, member 12), also known as JDP1 (J domain-containing protein 1), is a 198 amino acid protein that contains one J domain and is highly expressed in testis, brain and heart. Existing as two alternatively spliced isoforms, designated A and B, DnaJC12 may play a role in protein folding and export and is thought to be involved in estrogen control and the development of breast cancer. The gene encoding DnaJC12 maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome.

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., Lundquist-Heil, A., Yochem, J. and Feiss, M. 1980. Identification of the E. coli dnaJ gene product. *Mol. Gen. Genet.* 178: 583-588.
3. Hahn, Y., Lee, J., Seong, C., Yoon, J. and Chung, J.H. 1999. Structural analysis of phylogenetically conserved J domain protein gene. *Biochim. Biophys. Acta.* 1447: 325-333.
4. Lee, J., Hahn, Y., Yun, J.H., Mita, K. and Chung, J.H. 2000. Characterization of JDP genes, an evolutionarily conserved J domain-only protein family, from human and moths. *Biochim. Biophys. Acta.* 1491: 355-363.
5. De Bessa, S.A., Salaorni, S., Patrão, D.F., Neto, M.M., Brentani, M.M. and Nagai, M.A. 2006. JDP1 (DNAJC12/Hsp40) expression in breast cancer and its association with estrogen receptor status. *Int. J. Mol. Med.* 17: 363-367.
6. Ben Aicha, S., Lessard, J., Pelletier, M., Fournier, A., Calvo, E. and Labrie, C. 2007. Transcriptional profiling of genes that are regulated by the endoplasmic reticulum-bound transcription factor AlbiZIP/CREB3L4 in prostate cells. *Physiol. Genomics.* 31: 295-305.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606060. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. Mahlknecht, U. and Voelter-Mahlknecht, S. 2009. Chromosomal characterization and localization of the NAD⁺-dependent histone deacetylase gene sirTuin1 in the mouse. *Int. J. Mol. Med.* 23: 245-252.

CHROMOSOMAL LOCATION

Genetic locus: DNAJC12 (human) mapping to 10q21.3; Dnajc12 (mouse) mapping to 10 B4.

SOURCE

DnaJC12 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DnaJC12 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-104901 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DnaJC12 (N-14) is recommended for detection of DnaJC12 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 DnaJC12 siRNA (h): sc-90565, DnaJC12 siRNA (m): sc-143100, DnaJC12 shRNA Plasmid (h): sc-90565-SH, DnaJC12 shRNA Plasmid (m): sc-143100-SH, DnaJC12 shRNA (h) Lentiviral Particles: sc-90565-V and DnaJC12 shRNA (m) Lentiviral Particles: sc-143100-V.

Molecular Weight of DnaJC12: 23 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.

PROTOCOLS

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