SANTA CRUZ BIOTECHNOLOGY, INC.

DnaJC10 (66.7): sc-100713

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. DnaJC10 (DnaJ homolog subfamily C member 10), also known as ERdj5 (ER-resident protein) or macrothioredoxin, is an endoplasmic reticulum co-chaperone may play a role in protein folding and translocation across the endoplasmic reticulum membrane.

REFERENCES

1. Saito, H., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: DNAJC10 (human) mapping to 2q32.1; Dnajc10 (mouse) mapping to 2 C3.

SOURCE

DnaJC10 (66.7) is a mouse monoclonal antibody raised against recombinant DnaJC10 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DnaJC10 (66.7) is recommended for detection of DnaJC10 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 DnaJC10 siRNA (h): sc-94897, DnaJC10 siRNA (m): sc-143099, DnaJC10 shRNA Plasmid (h): sc-94897-SH, DnaJC10 shRNA Plasmid (m): sc-143099-SH, DnaJC10 shRNA (h) Lentiviral Particles: sc-94897-V and DnaJC10 shRNA (m) Lentiviral Particles: sc-143099-V.

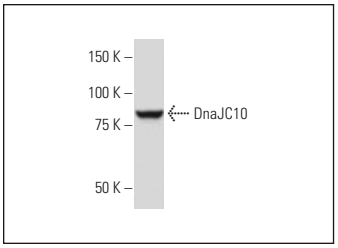
Molecular Weight of DnaJC10: 91 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

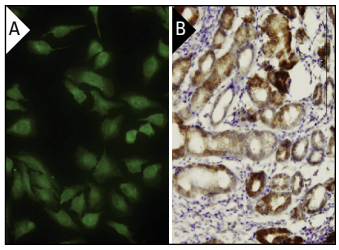
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



DnaJC10 (66.7): sc-100713. Western blot analysis of DnaJC10 expression in HeLa whole cell lysate.



DnaJC10 (66.7): sc-100713. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human stomach tissue showing cytoplasmic locali-zation (**B**).

SELECT PRODUCT CITATIONS

1. Fasano, E., et al. 2012. DHA induces apoptosis by altering the expression and cellular location of GRP78 in colon cancer cell lines. Biochim. Biophys. Acta 1822: 1762-1772.
2. Jeong, H., et al. 2023. ERdj5 protects goblet cells from endoplasmic reticulum stress-mediated apoptosis under inflammatory conditions. Exp. Mol. Med. 55: 401-412.

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 for detailed protocols and support products.