SANTA CRUZ BIOTECHNOLOGY, INC.

DnaJC3 (A-7): sc-393559

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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. DnaJC3 (DnaJ homolog subfamily C member 3), also known as P58, HP58, PRKRI or P58IPK, is a interferon-induced, double-stranded RNA-activated protein kinase inhibitor.

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 Hsp70 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.

CHROMOSOMAL LOCATION

Genetic locus: DNAJC3 (human) mapping to 13q32.1.

SOURCE

DnaJC3 (A-7) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of DnaJC3 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.

DnaJC3 (A-7) is available conjugated to agarose (sc-393559 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393559 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393559 PE), fluorescein (sc-393559 FITC), Alexa Fluor® 488 (sc-393559 AF488), Alexa Fluor® 546 (sc-393559 AF546), Alexa Fluor® 594 (sc-393559 AF594) or Alexa Fluor® 647 (sc-393559 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393559 AF680) or Alexa Fluor® 790 (sc-393559 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

DnaJC3 (A-7) is recommended for detection of DnaJC3 of 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), 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 DnaJC3 siRNA (h): sc-105309, DnaJC3 shRNA Plasmid (h): sc-105309-SH and DnaJC3 shRNA (h) Lentiviral Particles: sc-105309-V.

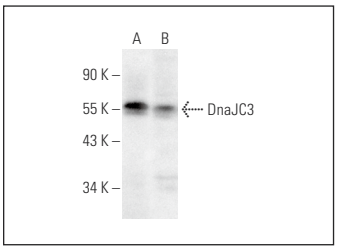
Molecular Weight of DnaJC3: 58 kDa.

Positive Controls: IFN treated HeLa whole cell lysate or IFN treated BJ whole cell lysate.

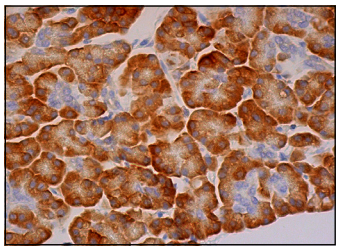
RECOMMENDED SUPPORT REAGENTS

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



DnaJC3 (A-7): sc-393559. Western blot analysis of DnaJC3 expression in IFN treated HeLa (**A**) and IFN treated BJ (**B**) whole cell lysates.



DnaJC3 (A-7): sc-393559. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

SELECT PRODUCT CITATIONS

1. Alalem, M., et al. 2022. Mutant p53 depletion by novel inhibitors for HSP40/J-domain proteins derived from the natural compound plumbagin. Cancers 14: 4187.

RESEARCH USE

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