# DnaJC3 (D-17): sc-84087



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 an 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.
- 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.
- 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.
- Stewart, G.R., et al. 2004. Analysis of the function of mycobacterial DnaJ proteins by overexpression and microarray profiling. Tuberculosis 84: 180-187.
- 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.
- Robichon, C., et al. 2006. DnaJA4 is a SREBP-regulated chaperone involved in the cholesterol biosynthesis pathway. Biochim. Biophys. Acta 1761: 1107-1113.
- 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: DNAJC3 (human) mapping to 13q32.1; Dnajc3a (mouse) mapping to 14 E4.

#### **SOURCE**

DnaJC3 (D-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of DnaJC3 of human origin.

#### **RESEARCH USE**

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

#### **PRODUCT**

Each vial contains 100  $\mu$ g lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-84087 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-84087 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

DnaJC3 (D-17) is recommended for detection of DnaJC3 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).

DnaJC3 (D-17) is also recommended for detection of DnaJC3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DnaJC3 siRNA (h): sc-105309, DnaJC3 siRNA (m): sc-143108, DnaJC3 shRNA Plasmid (h): sc-105309-SH, DnaJC3 shRNA Plasmid (m): sc-143108-SH, DnaJC3 shRNA (h) Lentiviral Particles: sc-105309-V and DnaJC3 shRNA (m) Lentiviral Particles: sc-143108-V.

DnaJC3 (D-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of DnaJC3: 58 kDa.

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

# **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.



Try **DnaJC3 (A-7):** sc-393559, our highly recommended monoclonal alternative to DnaJC3 (D-17).

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**