

HSP 40 (B-3): sc-398766



The Power to Question

BACKGROUND

Heat shock protein 40 (HSP 40) family proteins bind to HSP 70 through their J-domain and regulate the function of HSP 70 by stimulating HSP 70 ATPase activity. HSP 40, also known as DnaJ, functions together with DnaK (HSP 70) and GrpE as a molecular chaperone, involving them in assembly and disassembly of protein complexes, protein folding, renaturation of denatured proteins, prevention of protein aggregation and protein export. HSP 40 stimulates the association between HSC 70 and HIP and translocates rapidly from the cytoplasm to the nuclei, and especially to the nucleoli, upon heat shock. There are five known HSP 40 family proteins.

CHROMOSOMAL LOCATION

Genetic locus: DNAJB1 (human) mapping to 19p13.12; Dnajb1 (mouse) mapping to 8 C2.

SOURCE

HSP 40 (B-3) is a mouse monoclonal antibody raised against amino acids 241-340 mapping at the C-terminus of HSP 40 protein 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HSP 40 (B-3) is available conjugated to agarose (sc-398766 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398766 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398766 PE), fluorescein (sc-398766 FITC), Alexa Fluor® 488 (sc-398766 AF488), Alexa Fluor® 546 (sc-398766 AF546), Alexa Fluor® 594 (sc-398766 AF594) or Alexa Fluor® 647 (sc-398766 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398766 AF680) or Alexa Fluor® 790 (sc-398766 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HSP 40 (B-3) is recommended for detection of HSP 40 subfamily B member 1 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).

HSP 40 (B-3) is also recommended for detection of HSP 40 subfamily B member 1 in additional species, including canine and bovine.

Suitable for use as control antibody for HSP 40 siRNA (h): sc-35599, HSP 40 siRNA (m): sc-40656, HSP 40 shRNA Plasmid (h): sc-35599-SH, HSP 40 shRNA Plasmid (m): sc-40656-SH, HSP 40 shRNA (h) Lentiviral Particles: sc-35599-V and HSP 40 shRNA (m) Lentiviral Particles: sc-40656-V.

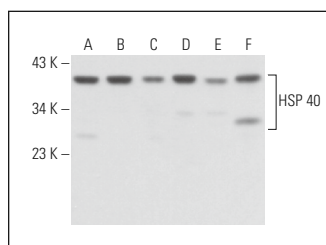
Molecular Weight of HSP 40: 40 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

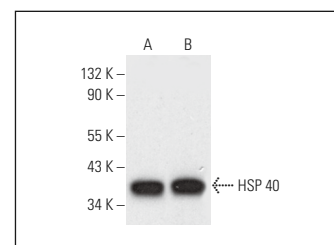
RECOMMENDED SUPPORT REAGENTS

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



HSP 40 (B-3): sc-398766. Western blot analysis of HSP 40 expression in Hep G2 (A), SW480 (B), MCF7 (C), F9 (D) and Sol8 (E) whole cell lysates and rat testis tissue extract (F).



HSP 40 (B-3): sc-398766. Western blot analysis of HSP 40 expression in Jurkat (A) and K-562 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Prince, T., et al. 2018. Dual targeting of HSP 70 does not induce the heat shock response and synergistically reduces cell viability in muscle invasive bladder cancer. *Oncotarget* 9: 32702-32717.
2. Going, C.C., et al. 2018. Quantitative proteomic profiling reveals key pathways in the anticancer action of methoxychalcone derivatives in triple negative breast cancer. *J. Proteome Res.* 17: 3574-3585.
3. Chou, C.W., et al. 2019. Therapeutic effects of statins against lung adenocarcinoma via p53 mutant-mediated apoptosis. *Sci. Rep.* 9: 20403.
4. Gomes, S., et al. 2019. SLMP53-2 restores wild-type-like function to mutant p53 through HSP 70: promising activity in hepatocellular carcinoma. *Cancers* 11: 1151.
5. D'Amore, C., et al. 2020. Deciphering the role of protein kinase CK2 in the maturation/stability of CFTR F508del. *Biochim. Biophys. Acta Mol. Basis Dis.* 1866: 165611.
6. D'Amore, C., et al. 2022. KDM2A and KDM3B as potential targets for the rescue of F508del-CFTR. *Int. J. Mol. Sci.* 23: 9612.

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.