

HSPA14 (G-9): sc-398208



The Power to Question

BACKGROUND

The heat shock proteins (HSPs) comprise a group of highly conserved, abundantly expressed proteins with diverse functions, including the assembly and sequestering of multi-protein complexes, the transportation of nascent poly-peptide chains across cellular membranes and the regulation of protein folding. HSPA14 (heat shock 70 kDa protein 14), also known as HSP70-4 or HSP70L1, is a 509 amino acid novel HSP protein derived from human dendritic cells. Belonging to the heat shock protein 70 family, HSPA14 is thought to promote dendritic cell maturation. It is also suggested that HSPA14 stimulates secretion of the proinflammatory cytokines interleukin 12p70 (IL-12p70), IL-1 β , TNF α , and the chemokines IP-10, MIP-1 α , MIP-1 β , and normal T cell expressed and secreted (RANTES).

REFERENCES

- Voellmy, R., et al. 1985. Isolation and functional analysis of a human 70 kDa heat shock protein gene segment. *Proc. Natl. Acad. Sci. USA* 82: 4949-4953.
- Leung, T.K., et al. 1990. The human heat-shock protein family. Expression of a novel heat-inducible HSP 70 (HSP70B') and isolation of its cDNA and genomic DNA. *Biochem. J.* 267: 125-132.
- Milner, C.M. and Campbell, R.D. 1990. Structure and expression of the three MHC-linked HSP 70 genes. *Immunogenetics* 32: 242-251.

CHROMOSOMAL LOCATION

Genetic locus: HSPA14 (human) mapping to 10p13; Hspa14 (mouse) mapping to 2 A1.

SOURCE

HSPA14 (G-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 280-307 within an internal region of HSPA14 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HSPA14 (G-9) is available conjugated to agarose (sc-398208 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398208 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398208 PE), fluorescein (sc-398208 FITC), Alexa Fluor[®] 488 (sc-398208 AF488), Alexa Fluor[®] 546 (sc-398208 AF546), Alexa Fluor[®] 594 (sc-398208 AF594) or Alexa Fluor[®] 647 (sc-398208 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398208 AF680) or Alexa Fluor[®] 790 (sc-398208 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398208 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4 $^{\circ}$ C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

HSPA14 (G-9) is recommended for detection of HSPA14 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

HSPA14 (G-9) is also recommended for detection of HSPA14 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HSPA14 siRNA (h): sc-90528, HSPA14 siRNA (m): sc-146097, HSPA14 shRNA Plasmid (h): sc-90528-SH, HSPA14 shRNA Plasmid (m): sc-146097-SH, HSPA14 shRNA (h) Lentiviral Particles: sc-90528-V and HSPA14 shRNA (m) Lentiviral Particles: sc-146097-V.

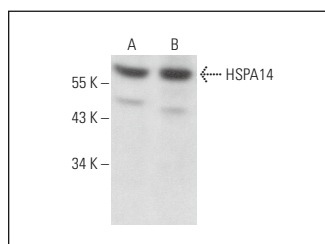
Molecular Weight of HSPA14: 55 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, BYDP whole cell lysate: sc-364368 or HeLa whole cell lysate: sc-2200.

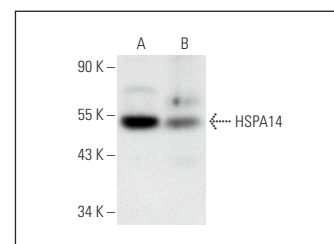
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



HSPA14 (G-9): sc-398208. Western blot analysis of HSPA14 expression in K-562 (A) and BYDP (B) whole cell lysates.



HSPA14 (G-9): sc-398208. Western blot analysis of HSPA14 expression in K-562 (A) and HeLa (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Rogala-Koziarska, K., et al. 2019. Amino acid transporter SLC6A14 depends on heat shock protein HSP90 in trafficking to the cell surface. *Biochim. Biophys. Acta Mol. Cell Res.* 1866: 1544-1555.

RESEARCH USE

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

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