

# HSPB2 (N-14): sc-109285

## 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, transportation of nascent polypeptide chains across cellular membranes and regulation of protein folding. HSPB2 (heat shock 27 kDa protein 2), also known as HSP 27 or MKBP, is a 182 amino acid protein that belongs to the heat shock protein family and is expressed preferentially in heart and skeletal muscle. Localized to mitochondria, HSPB2 functions as an ATP-dependent chaperone protein that plays a role in the refolding of denatured proteins and may also interact with the Actin cytoskeleton and prevent apoptotic cell death. HSPB2 is abundantly expressed in several cancer cell lines, suggesting that HSPB2 may be an important factor in tumor transformation and metastasis.

## REFERENCES

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3. Wen, F.C., et al. 2003. Down-regulation of heat shock protein 27 in neuronal cells and non-neuronal cells expressing mutant Ataxin-3. *FEBS Lett.* 546: 307-314.
4. Mao, H., et al. 2003. HSP 72 inhibits focal adhesion kinase degradation in ATP-depleted renal epithelial cells. *J. Biol. Chem.* 278: 18214-18220.
5. Parcellier, A., et al. 2003. HSP 27 is a ubiquitin-binding protein involved in I $\kappa$ B $\alpha$  proteasomal degradation. *Mol. Cell. Biol.* 23: 5790-5802.
6. An, S.S., et al. 2004. Role of heat shock protein 27 in cytoskeletal remodeling of the airway smooth muscle cell. *J. Appl. Physiol.* 96: 1701-1713.
7. Shimura, H., et al. 2004. Binding of Tau to heat shock protein 27 leads to decreased concentration of hyperphosphorylated Tau and enhanced cell survival. *J. Biol. Chem.* 279: 17957-17962.

## CHROMOSOMAL LOCATION

Genetic locus: HSPB2 (human) mapping to 11q23.1; Hspb2 (mouse) mapping to 9 A5.3.

## SOURCE

HSPB2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HSPB2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109285 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

HSPB2 (N-14) is recommended for detection of HSPB2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Suitable for use as control antibody for HSPB2 siRNA (h): sc-96438, HSPB2 siRNA (m): sc-146101, HSPB2 shRNA Plasmid (h): sc-96438-SH, HSPB2 shRNA Plasmid (m): sc-146101-SH, HSPB2 shRNA (h) Lentiviral Particles: sc-96438-V and HSPB2 shRNA (m) Lentiviral Particles: sc-146101-V.

Molecular Weight (predicted) of HSPB2: 20 kDa.

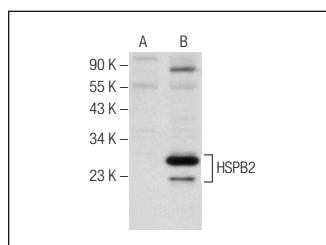
Molecular Weight (observed) of HSPB2: 24 kDa.

Positive Controls: human HSPB2 transfected HEK293T whole cell lysate.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



HSPB2 (N-14): sc-109285. Western blot analysis of HSPB2 expression in non-transfected (A) and human HSPB2 transfected (B) HEK293T whole cell lysates.

## STORAGE

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

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Try **HSPB2 (6): sc-136339** or **HSPB2 (F-9): sc-514154**, our highly recommended monoclonal alternatives to HSPB2 (N-14).