

# p-HSP 27 (Ser 15): sc-12359

## BACKGROUND

HSP 27 is a constitutively expressed cytoplasmic protein that co-localizes to the nucleus upon stress-induced insult. The intracellular concentration of HSP 27 increases several-fold after heat shock and other metabolic stresses, and is closely associated with the acquisition of thermotolerance. In addition to heat shock, cytokines and hormones are among the factors that stimulate the synthesis of HSP 27. MAP kinase-activated protein kinase-2 phosphorylates HSP 27 on Serine residues Ser 15, Ser 78 and Ser 82, which are phosphorylated *in vivo* in response to growth factors and heat shock. Ser 15, Ser 78 and Ser 82 occur in the sequence motif RXXS, which is recognized by ribosomal protein S6 kinase II.

## CHROMOSOMAL LOCATION

Genetic locus: HSPB1 (human) mapping to 7q11.23.

## SOURCE

p-HSP 27 (Ser 15) is available as either goat (sc-12359) or rabbit (sc-12359-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 15 phosphorylated HSP 27 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12359 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

p-HSP 27 (Ser 15) is recommended for detection of Ser 15 phosphorylated HSP 27 of human origin by Western Blotting (starting dilution 1:200, 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).

p-HSP 27 (Ser 15) is also recommended for detection of correspondingly phosphorylated HSP 27 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HSP 27 siRNA (h): sc-29350, HSP 27 shRNA Plasmid (h): sc-29350-SH and HSP 27 shRNA (h) Lentiviral Particles: sc-29350-V.

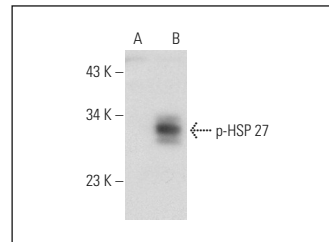
Molecular Weight of HSP 27: 27 kDa.

Positive Controls: HSP 27 (h): 293T Lysate: sc-174710, ECV304 cell lysate: sc-2269 or HeLa whole cell lysate: sc-2200.

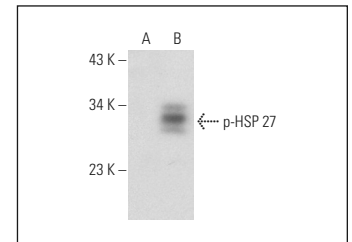
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-14268): use donkey anti-goat IgG-HRP: sc-2020 (range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (range: 1:2000-1:5000), for rabbit primary antibody (sc-14268-R): use goat anti-rabbit IgG-HRP: sc-2004 (range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (range: 1:2000-1:5000); Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: for goat primary antibody (sc-14268): use donkey anti-goat IgG-FITC: sc-2024 (range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (range: 1:100-1:400), for rabbit primary antibody (sc-14268-R): use goat anti-rabbit IgG-FITC: sc-2012 (range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



p-HSP 27 (Ser 15)-R: sc-12359-R. Western blot analysis of HSP 27 phosphorylation in non-transfected: sc-117752 (A) and human HSP 27 transfected: sc-174710 (B) 293T whole cell lysates.



p-HSP 27 (Ser 15)-R: sc-12359-R. Western blot analysis of HSP 27 phosphorylation in non-transfected: sc-117752 (A) and human HSP 27 transfected: sc-174711 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Somara, S., et al. 2004. Tropomyosin interacts with phosphorylated HSP 27 in agonist-induced contraction of smooth muscle. *Am. J. Physiol., Cell Physiol.* 286: C1290-C1301.
- Jia, Z., et al. 2004. Grp78 is essential for 11-deoxy-16,16-dimethyl PGE2-mediated cytoprotection in renal epithelial cells. *Am. J. Physiol. Renal Physiol.* 287: F1113-F1122.
- Dong, J., et al. 2004. EGFR-independent activation of p38 MAPK and EGFR-dependent activation of ERK1/2 are required for ROS-induced renal cell death. *Am. J. Physiol. Renal Physiol.* 287: F1049-F1058.
- Lee, Y.J., et al. 2005. HSP25 inhibits protein kinase C  $\delta$ -mediated cell death through direct interaction. *J. Biol. Chem.* 280: 18108-18119.
- Faber, M.J., et al. 2007. Time dependent changes in cytoplasmic proteins of the right ventricle during prolonged pressure overload. *J. Mol. Cell. Cardiol.* 43: 197-209.