SANTA CRUZ BIOTECHNOLOGY, INC.

HSP 60 (K-19): sc-1722

SANTA CRUZ BIOTECHNOLOGY

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 multiprotein complexes, transportation of nascent poly-peptide chains across cellular membranes, and the regulation of protein folding. HSPs (also known as molecular chaperones) fall into six general families: HSP 90, HSP 70, HSP 60, the low molecular weight HSPs, the immunophilins and the HSP 110 family. The constitutively expressed mitochondrial protein HSP 60 shares the ability to recognize and stabilize proteins during folding, assembly and disassembly with other HSP family members. The mitochondrial and cytosolic localization of HSP 60, combined with its binding and catalysis of folding of newly synthesized proteins destined for the mitochondrial matrix, classify this protein as a molecular chaperone. An additional role of HSP 60 is to act as a cell surface marker for γ/δ T cell recognition.

CHROMOSOMAL LOCATION

Genetic locus: HSPD1 (human) mapping to 2q33.1; Hspd1 (mouse) mapping to 1 C1.2.

SOURCE

HSP 60 (K-19) is available as either goat (sc-1722) or rabbit (sc-1722-R) polyclonal affinity purified antibody raised against a peptide mapping near the C-terminus of HSP 60 of mouse 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-1722 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-1722 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

HSP 60 (K-19) is recommended for detection of HSP 60 of mouse, rat and 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).

Suitable for use as control antibody for HSP 60 siRNA (h): sc-29351, HSP 60 siRNA (m): sc-35604, HSP 60 shRNA Plasmid (h): sc-29351-SH, HSP 60 shRNA Plasmid (m): sc-35604-SH, HSP 60 shRNA (h) Lentiviral Particles: sc-29351-V and HSP 60 shRNA (m) Lentiviral Particles: sc-35604-V.

Molecular Weight of HSP 60: 60 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, KNRK whole cell lysate: sc-2214 or HeLa whole cell lysate: sc-2200.

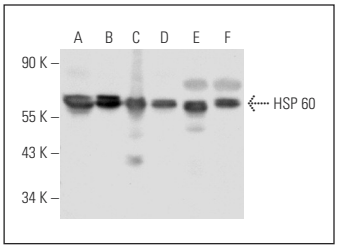
RESEARCH USE

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

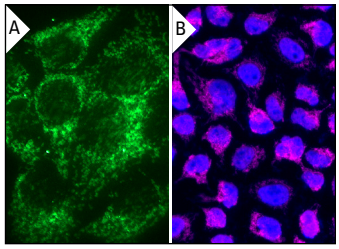
STORAGE

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

DATA



HSP 60 (K-19)-R: sc-1722-R. Western blot analysis of HSP 60 expression in KNRK (**A**), HeLa (**B**), NIH/3T3 (**C**) and NRK (**D**) whole cell lysates and mouse kidney (**E**) and mouse placenta (**F**) tissue extracts.



HSP 60 (K-19): sc-1722. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization (**A**). donkey anti-goat IgG-CFL 647: sc-362285. Immunofluorescence staining of formalin-fixed HeLa cells showing mitochondrial localization and nuclear DAPI counter-stain. Antibody tested: HSP 60 (K-19): sc-1722. Donkey anti-goat IgG was conjugated to CruzFluor™ 647 succinimidyl ester: sc-362620. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Childrens Hospital, Cell Biology Department, Harvard Medical School (**B**).

SELECT PRODUCT CITATIONS

1. Luciano F, et al. 2003. Phosphorylation of Bim-E_L by Erk1/2 on serine 69 promotes its degradation via the proteasome pathway and regulates its proapoptotic function. Oncogene 22: 6785-6793.
2. Fenouille, N., et al. 2011. SPARC functions as an anti-stress factor by inactivating p53 through Akt-mediated MDM2 phosphorylation to promote melanoma cell survival. Oncogene 30: 4887-4900.
3. Rufino-Palomares, E., et al. 2011. Proteomics in the liver of gilthead sea bream *(Sparus aurata)* to elucidate the cellular response induced by the intake of maslinic acid. Proteomics 11: 3312-3325.
4. Robert, G., et al. 2012. The anti-apoptotic Bcl-B protein inhibits BECN1-dependent autophagic cell death. Autophagy 8: 637-649.
5. Rosilio, C., et al. 2013. The metabolic perturbators metformin, phenformin and AICAR interfere with the growth and survival of murine PTEN-deficient T cell lymphomas and human T-ALL/T-LL cancer cells. Cancer Lett. 336: 114-126.
6. Bahat, A., et al. 2014. StAR enhances transcription of genes encoding the mitochondrial proteases involved in its own degradation. Mol. Endocrinol. 28: 208-224.

MONOS Satisfaction Guaranteed

Try **HSP 60 (LK1): sc-59567** or **HSP 60 (C-10): sc-376240**, our highly recommended monoclonal alternatives to HSP 60 (K-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **HSP 60 (LK1): sc-59567**.