

# HSP 20 (HSP20-11): sc-51955

## 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 polypeptide chains across cellular membranes and regulation of protein folding. Heat shock proteins (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 low molecular weight family includes HSP 10, HSP 20, HSP 27 (Heme Oxygenase 1), HSP 32 and HSP 40. HSP 20 occurs in two complex sizes, dimers and multimers. It is related to stress proteins and occurs most abundantly in skeletal muscle and heart. HSP 20 is considerably shorter at the C-terminus and less polar than other small heat shock proteins.

## REFERENCE

1. van de Klundert, F.A., et al. 1998. The mammalian small heat-shock protein Hsp20 forms dimers and is a poor chaperone. *Eur. J. Biochem.* 258: 1014-1021.
2. Bukach, O.V., et al. 2004. Some properties of human small heat shock protein Hsp20 (HspB6). *Eur. J. Biochem.* 271: 291-302.
3. Gusev, N.B., et al. 2005. Structure, properties, and probable physiological role of small heat shock protein with molecular mass 20 kD (Hsp20, HspB6). *Biochemistry* 70: 629-637.

## CHROMOSOMAL LOCATION

Genetic locus: HSPB6 (human) mapping to 19q13.12; Hspb6 (mouse) mapping to 7 B1.

## SOURCE

HSP 20 (HSP20-11) is a mouse monoclonal antibody raised against recombinant HSP 20.

## PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HSP 20 (HSP20-11) is recommended for detection of HSP 20 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for HSP 20 siRNA (h): sc-45675, HSP 20 siRNA (m): sc-45676, HSP 20 shRNA Plasmid (h): sc-45675-SH, HSP 20 shRNA Plasmid (m): sc-45676-SH, HSP 20 shRNA (h) Lentiviral Particles: sc-45675-V and HSP 20 shRNA (m) Lentiviral Particles: sc-45676-V.

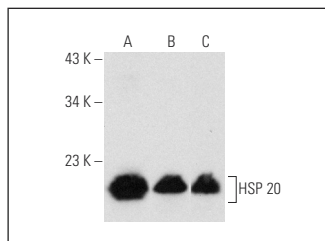
Molecular Weight of HSP 20: 20 kDa.

Positive Controls: rat heart extract: sc-2393, rat skeletal muscle extract: sc-364810 or Hs 732.Sk/Mu whole cell lysate: sc-364362.

## STORAGE

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

## DATA



HSP 20 (HSP20-11): sc-51955. Western blot analysis of HSP 20 expression in rat heart (A) and rat skeletal muscle (B) tissue extracts and Hs 732.Sk/Mu whole cell lysate (C).

## SELECT PRODUCT CITATIONS

1. Guillemain, N., et al. 2011. Functional analysis of beef tenderness. *J. Proteomics* 75: 352-365.
2. Guillemain, N., et al. 2011. Variations in the abundance of 24 protein biomarkers of beef tenderness according to muscle and animal type. *Animal* 5: 885-894.
3. García, A., et al. 2011. High-resolution two-dimensional gel electrophoresis analysis of atrial tissue proteome reveals down-regulation of Fibulin-1 in atrial fibrillation. *Int. J. Cardiol.* 150: 283-290.
4. Li, Y., et al. 2017. Loss of type 9 adenylyl cyclase triggers reduced phosphorylation of Hsp20 and diastolic dysfunction. *Sci. Rep.* 7: 5522.
5. Gagaoua, M., et al. 2017. The study of protein biomarkers to understand the biochemical processes underlying beef color development in young bulls. *Meat Sci.* 134: 18-27.
6. Gagaoua, M., et al. 2017. Associations among protein biomarkers and pH and color traits in longissimus thoracis and rectus abdominis muscles in protected designation of origin Maine-Anjou cull cows. *J. Agric. Food Chem.* 65: 3569-3580.
7. Gagaoua, M., et al. 2018. Reverse phase protein arrays for the identification/validation of biomarkers of beef texture and their use for early classification of carcasses. *Food Chem.* 250: 245-252.
8. Gagaoua, M., et al. 2018. Reverse phase protein array for the quantification and validation of protein biomarkers of beef qualities: the case of meat color from Charolais breed. *Meat Sci.* 145: 308-319.
9. Picard, B., et al. 2018. Beef tenderness and intramuscular fat proteomic biomarkers: muscle type effect. *PeerJ* 6: e4891.

## RESEARCH USE

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