

# HSP 20 (B-6): sc-518203

## 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.

## REFERENCES

- 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.
- Bukach, O.V., et al. 2004. Some properties of human small heat shock protein Hsp20 (HspB6). *Eur. J. Biochem.* 271: 291-302.
- 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.
- Batts, T.W., et al. 2005. Absence of force suppression in rabbit bladder correlates with low expression of heat shock protein 20. *BMC Physiol.* 5: 16.
- Bukach, O.V., et al. 2005. Small heat shock protein with apparent molecular mass 20 kDa (Hsp20, HspB6) is not a genuine Actin-binding protein. *J. Muscle Res. Cell Motil.* 26: 175-181.

## CHROMOSOMAL LOCATION

Genetic locus: HSPB6 (human) mapping to 19q13.12.

## SOURCE

HSP 20 (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 99-119 of HSP 20 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HSP 20 (B-6) is available conjugated to agarose (sc-518203 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518203 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518203 PE), fluorescein (sc-518203 FITC), Alexa Fluor® 488 (sc-518203 AF488), Alexa Fluor® 546 (sc-518203 AF546), Alexa Fluor® 594 (sc-518203 AF594) or Alexa Fluor® 647 (sc-518203 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518203 AF680) or Alexa Fluor® 790 (sc-518203 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

HSP 20 (B-6) is recommended for detection of HSP 20 of human origin by Western Blotting (starting dilution 1:100, 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 20 siRNA (h): sc-45675, HSP 20 shRNA Plasmid (h): sc-45675-SH and HSP 20 shRNA (h) Lentiviral Particles: sc-45675-V.

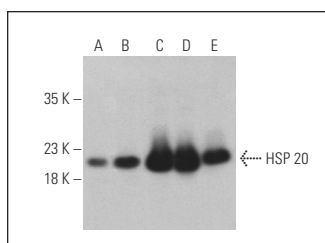
Molecular Weight of HSP 20: 20 kDa.

Positive Controls: NCI-H460 whole cell lysate: sc-364235, BJ whole cell lysate: sc-364359 or human heart extract: sc-363763.

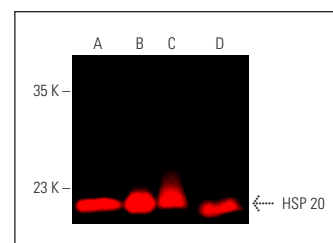
## RECOMMENDED SECONDARY REAGENTS

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



HSP 20 (B-6): sc-518203. Western blot analysis of HSP 20 expression in NCI-H460 (A) and BJ (B) whole cell lysates and human skeletal muscle (C), human heart (D) and human testis (E) tissue extracts. Detection reagent used: m-IgG<sub>2a</sub> BP-HRP: sc-542731.



HSP 20 (B-6): sc-518203. Near-Infrared western blot analysis of HSP 20 expression in BJ whole cell lysate (A) and human skeletal muscle (B), human heart (C) and human testis (D) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG Fc BP-CFL 790: sc-533658.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.