SANTA CRUZ BIOTECHNOLOGY, INC.

HSP 20 (B-22): sc-133677

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 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

1. van de Klundert, FA., et al. 1998. The mammalian small heat-shock protein HSP 20 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 HSP 20 (HSPB 6). 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 (HSP 20, HSP 6). Biochemistry 70: 629-637.
4. 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.
5. Bukach, O.V., et al. 2005. Small heat shock protein with apparent molecular mass 20 kDa (HSP 20, HSP B6) is not a genuine Actin-binding protein. J. Muscle Res. Cell Motil. 26: 175-181.
6. Fontaine, J.M., et al. 2005. Interactions of HSP22 (HSPB8) with HSP 20, αB-crystallin and HSPB3. Biochem. Biophys. Res. Commun. 337: 1006-1011.

CHROMOSOMAL LOCATION

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

SOURCE

HSP 20 (B-22) is a a Protein A purified rabbit polyclonal antibody raised against an internal region of synthetic HSP 20 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

HSP 20 (B-22) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HSP 20 (B-22) is also recommended for detection of HSP 20 in additional species, including equine, bovine and canine.

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.

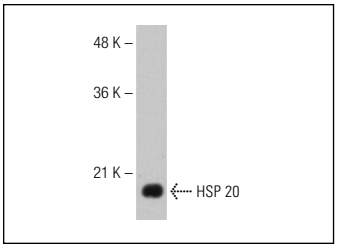
Molecular Weight of HSP 20: 20 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



HSP 20 (B-22): sc-133677. Western blot analysis of HSP 20 expression in Hep G2 whole cell lysate.

RESEARCH USE

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