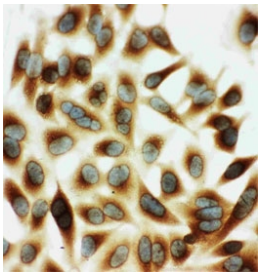
HSPB2 Antibody / Small Heat Shock Protein Antibody (R30900)

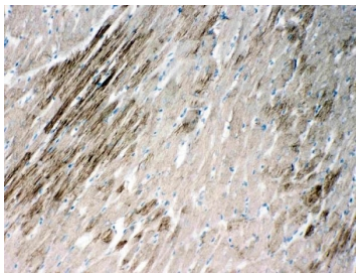
Catalog No.	Formulation	Size
R30900	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

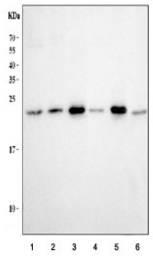
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	Q16082
Localization	Cytoplasmic
Applications	Western blot: 0.5-1ug/ml IHC (Frozen): 0.5-1ug/ml Immunocytochemistry: 0.5-1ug/ml
Limitations	This HSPB2 Antibody / Small Heat Shock Protein Antibody is available for research use only.



HSPB2 Antibody Human HeLa Cell ICC. Immunocytochemical staining of human HeLa cells using HSPB2 antibody demonstrated predominantly cytoplasmic staining, consistent with the localization of HSPB2 as a small heat shock protein that functions as an ATP-independent molecular chaperone. The staining pattern highlights expression throughout the cytoplasm, where HSPB2 contributes to protein folding, maintenance of proteostasis, and protection against cellular stress. This HSPB2 Antibody, also called a Small Heat Shock Protein Antibody, is useful for investigating molecular chaperone function, protein homeostasis, muscle biology, and cellular stress responses.



HSPB2 Antibody Rat Heart IHC-F. Immunohistochemical staining of frozen rat heart tissue using HSPB2 antibody demonstrated strong cytoplasmic staining within cardiac muscle fibers, consistent with the high expression of HSPB2 in striated muscle. The observed staining pattern supports the role of HSPB2 as a small heat shock protein that protects muscle cells from protein misfolding and stress-induced damage while maintaining protein homeostasis. This HSPB2 Antibody, also called a Small Heat Shock Protein Antibody, is useful for investigating molecular chaperone function, cardiac and skeletal muscle biology, and cellular stress responses.



HSPB2 Antibody Human, Rat and Mouse WB. Western blot testing of human U-2 OS (lane 1), human PC-3 (lane 2), rat H9C2 (lane 3), rat heart (lane 4), mouse C2C12 (lane 5), and mouse heart (lane 6) lysates using HSPB2 antibody detected a specific band at approximately 20 kDa, consistent with the predicted molecular weight of HSPB2. Detection across human and rodent cell lines and tissues demonstrates broad species reactivity for this small heat shock protein. This HSPB2 Antibody, also called a Small Heat Shock Protein Antibody, is useful for investigating molecular chaperone function, muscle biology, protein homeostasis, and cellular stress responses.

Description

HSPB2 Antibody / Small Heat Shock Protein Antibody recognizes HSPB2, also known as Heat Shock Protein Beta-2, a member of the small heat shock protein family that functions as an ATP-independent molecular chaperone. HSPB2 helps maintain protein homeostasis by preventing the aggregation of partially unfolded proteins during conditions of cellular stress. Unlike many heat shock proteins that are broadly expressed, HSPB2 is most abundant in cardiac and skeletal muscle, where it contributes to maintenance of contractile tissues with high metabolic demands. Its specialized expression pattern and protective functions have made HSPB2 an important target for studies of muscle physiology, stress adaptation, and protein quality control.

HSPB2 forms dynamic oligomeric complexes and interacts with client proteins to stabilize their structure during heat shock, oxidative stress, ischemia, and other adverse conditions. The protein is closely associated with alpha crystallin family members, particularly HSPB5 (alpha B crystallin), and together these chaperones help preserve cytoskeletal organization, mitochondrial integrity, and cellular viability. HSPB2 also interacts with myotonic dystrophy protein kinase, linking it to signaling pathways involved in muscle maintenance and differentiation. Through these activities, HSPB2 supports protein folding, stress tolerance, and recovery following cellular injury.

Altered HSPB2 expression has been associated with cardiomyopathy, skeletal muscle disorders, ischemic injury, and several cancers. Because maintenance of protein homeostasis is essential for long-lived tissues such as heart and skeletal muscle, HSPB2 is actively investigated for its role in protecting cells against oxidative damage, mitochondrial dysfunction, and apoptosis. Ongoing research continues to explore how HSPB2 contributes to muscle development, energy metabolism, and disease progression, as well as its potential value as a biomarker and therapeutic target in disorders characterized by impaired protein quality control.

As a member of the small heat shock protein family, HSPB2 serves as an important regulator of cellular proteostasis during physiological and pathological stress. Its tissue-specific expression and molecular chaperone activity make it a valuable model for understanding stress adaptation in muscle and other metabolically active tissues. An HSPB2 Antibody is a valuable research tool for investigating small heat shock proteins, molecular chaperone function, muscle biology, protein homeostasis, and cellular stress responses.

Explore additional research tools for cancer biology, stress signaling, and cellular regulation on our Cancer Marker Antibodies page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the HSPB2 Antibody / Small Heat Shock Protein Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the middle region of human HSPB2 (RHPQRLDRHGFVSREFC) was used as the immunogen for this HSPB2 antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the HSPB2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

HSPB2 antibody, Small Heat Shock Protein antibody, Heat Shock Protein Beta-2 antibody, Alpha Crystallin Related Protein antibody

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