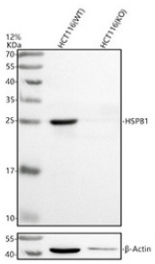
HSP27 Antibody HII-8 / HSPB1 Rabbit Monoclonal Antibody [clone HII-8] (RQ5080)

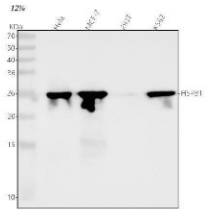
Catalog No.	Formulation	Size
RQ5080	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

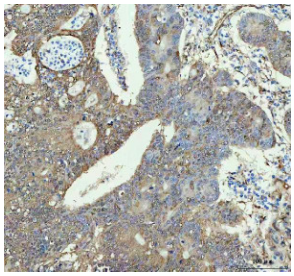
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	HII-8
Purity	Affinity purified
UniProt	P04792
Applications	Western blot: 1:500-1:1000 Immunohistochemistry (FFPE): 1:50 Immunofluorescence: 1:50-1:500
Limitations	This HSP27 Antibody HII-8 / HSPB1 Rabbit Monoclonal Antibody is available for research use only.



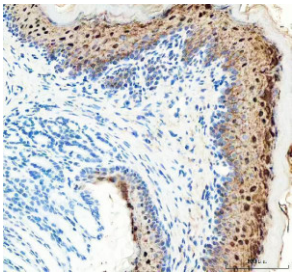
HSP27 Antibody HII-8 WB Analysis of HCT116 WT and HSPB1 KO Cell Lysates. Western blot analysis of human HCT116 wild-type (lane 1) and HSPB1 knockout (lane 2) whole-cell lysates using HSPB1 Rabbit Monoclonal Antibody clone HII-8 at a 1:500 dilution. A band is detected at approximately 25-27 kDa in wild-type cells, with markedly reduced signal in the HSPB1 knockout sample, supporting antibody specificity for HSP27/HSPB1. The calculated molecular weight of HSPB1 is approximately 22.8 kDa. Each lane contains 30 ug of total protein. Beta-actin is shown as a loading control.



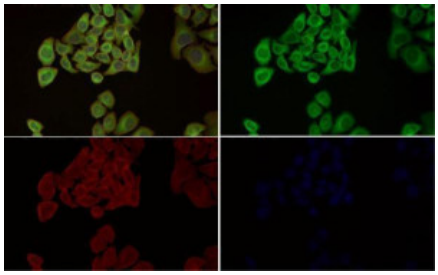
HSP27 Antibody HII-8 WB Analysis of HeLa, MCF-7, 293T and K562 Cell Lysates. Western blot analysis of human HeLa (lane 1), MCF-7 (lane 2), 293T (lane 3), and K562 (lane 4) whole-cell lysates using HSPB1 Rabbit Monoclonal Antibody clone HII-8 at a 1:500 dilution. An immunoreactive band is detected at approximately 27 kDa, compared with the calculated HSPB1 molecular weight of approximately 22.8 kDa. Each lane contains 30 ug of total protein separated under reducing conditions.



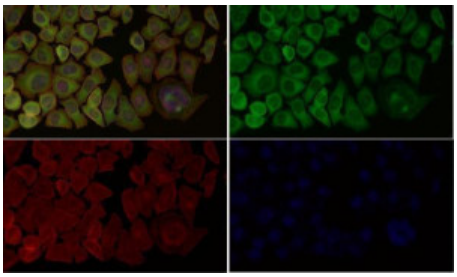
HSP27 Antibody HII-8 IHC Staining of Human Colon Cancer Tissue. Immunohistochemical analysis of FFPE human colon cancer tissue using HSPB1 Rabbit Monoclonal Antibody clone HII-8 at a 1:50 dilution. Brown DAB staining is observed predominantly in the cytoplasm of tumor cells. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8.



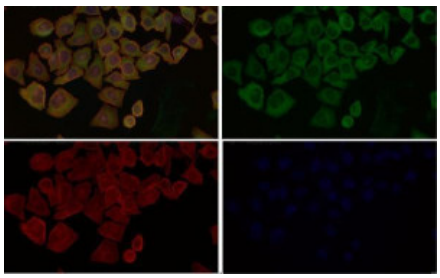
HSP27 Antibody HII-8 IHC Staining of Rat Stomach Tissue. Immunohistochemical analysis of FFPE rat stomach tissue using HSPB1 Rabbit Monoclonal Antibody clone HII-8 at a 1:50 dilution. Brown DAB immunoreactivity is observed in epithelial and other cellular components of the stomach tissue. Heat-induced epitope retrieval was performed using EDTA buffer at pH 8.



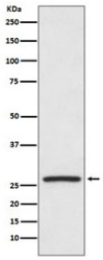
HSP27 Antibody HII-8 IF Staining of HeLa Cells at 1:50 (green). Immunofluorescence analysis of human HeLa cells using HSPB1 Rabbit Monoclonal Antibody clone HII-8 at a 1:50 dilution. Green fluorescence demonstrates cytoplasmic HSPB1-associated staining. Phalloidin-TRITC labels filamentous actin in red, and DAPI counterstains nuclei in blue. Individual fluorescence channels and the merged image are shown.



HSP27 Antibody HII-8 IF Staining of HeLa Cells at 1:150 (green). Immunofluorescence analysis of human HeLa cells using HSPB1 Rabbit Monoclonal Antibody clone HII-8 at a 1:150 dilution. Green fluorescence demonstrates predominantly cytoplasmic HSPB1-associated staining. Phalloidin-TRITC labels filamentous actin in red, and DAPI counterstains nuclei in blue. Individual fluorescence channels and the merged image are shown.



HSP27 Antibody HII-8 IF Staining of HeLa Cells at 1:500 (green). Immunofluorescence analysis of human HeLa cells using HSPB1 Rabbit Monoclonal Antibody clone HII-8 at a 1:500 dilution. Green fluorescence demonstrates predominantly cytoplasmic HSPB1-associated staining. Phalloidin-TRITC labels filamentous actin in red, and DAPI counterstains nuclei in blue. Individual fluorescence channels and the merged image are shown.



Western blot testing of human HeLa cell lysate with HSP27 antibody. Expected molecular weight: 23-27 kDa.

Description

HSP27 Antibody HII-8 / HSPB1 Rabbit Monoclonal Antibody targets heat shock protein beta-1 (HSPB1), commonly known as HSP27, a member of the small heat shock protein family that protects cells against environmental and physiological stress. HSPB1 functions as an ATP-independent molecular chaperone, interacting with partially unfolded proteins to reduce aggregation and preserve their capacity for subsequent refolding or degradation. Its expression is influenced by heat shock, oxidative stress, inflammatory signaling, and other conditions that disrupt cellular homeostasis. HSPB1 is particularly important in maintaining protein quality control during periods of increased cellular stress.

HSPB1 forms dynamic oligomeric assemblies whose organization is regulated by phosphorylation and interactions with other proteins. Major phosphorylation sites include Ser15, Ser78, and Ser82, which are targeted by kinases associated with stress-responsive signaling pathways, including the p38 MAPK-MAPKAPK2 cascade. Phosphorylation influences oligomer size, chaperone activity, and interactions with cytoskeletal components. HSPB1 also participates in actin filament organization and cellular motility, helping coordinate structural changes during stress responses. Its ability to associate with intermediate filament proteins further connects molecular chaperone activity with cytoskeletal stability.

Beyond protein folding, HSPB1 contributes to the regulation of apoptosis, oxidative damage, and mitochondrial function. It can influence apoptotic signaling through interactions with components of the cell death machinery and helps limit cellular injury associated with reactive oxygen species. HSPB1 has also been implicated in autophagy, protein clearance, and the maintenance of proteostasis. These activities are especially relevant in cells exposed to sustained metabolic or environmental challenges, where accumulation of damaged proteins can compromise viability.

Altered HSPB1 expression and phosphorylation have been investigated in cancer, cardiovascular disease, and neurodegenerative disorders. Elevated HSPB1 levels in certain tumors have been associated with stress tolerance, treatment resistance, and changes in cellular migration, although its effects depend on biological context. Pathogenic variants in HSPB1 are also linked to inherited peripheral neuropathies, including forms of Charcot-Marie-Tooth disease and distal hereditary motor neuropathy. HSP27 Antibody HII-8 supports investigation of HSPB1 expression and its relationship to protein homeostasis, cytoskeletal regulation, stress signaling, and cell survival.

For an additional monoclonal antibody to HSPB1 with Protein Microarray Validated specificity data, see our HSPB1 Antibody / Heat Shock Protein Beta-1 Antibody page.

Application Notes

Optimal dilution of the HSP27 Antibody HII-8 / HSPB1 Rabbit Monoclonal Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human HSP27 / HSPB1 was used as the immunogen for the HSP27 antibody.

Storage

Store the HSP27 antibody at -20oC.

Alternate Names

HSPB1 antibody, heat shock protein beta-1 antibody, heat shock protein 27 antibody, 27 kDa heat shock protein antibody, HSP25 antibody, HSP28 antibody, small heat shock protein 1 antibody, heat shock 27 kDa protein 1 antibody, estrogen-regulated 24 kDa protein antibody, stress-responsive protein 27 antibody

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