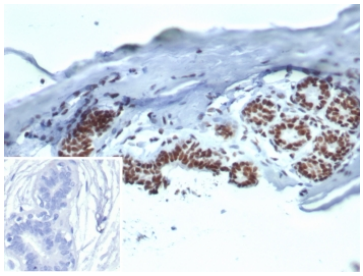
Heat Shock 70 kDa Protein 1B Antibody / HSP70-1B Antibody [clone HSPA1B/7626] (V5147)

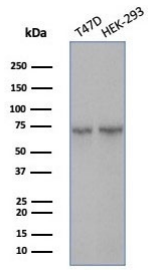
Catalog No.	Formulation	Size
V5147-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5147-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5147SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

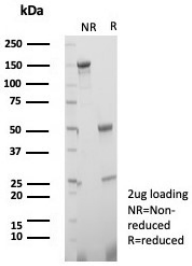
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	HSPA1B/7626
Purity	Protein A/G affinity
UniProt	P0DMV9
Localization	Cytoplasm, Nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Western blot: 1-2ug/ml
Limitations	This Heat Shock 70 kDa Protein 1B Antibody / HSP70-1B Antibody is available for research use only.



Heat Shock 70 kDa Protein 1B Antibody HSPA1B/7626 Staining of Human Breast Carcinoma IHC. Immunohistochemistry testing of FFPE human breast carcinoma tissue with Heat Shock 70 kDa Protein 1B Antibody clone HSPA1B/7626 shows strong brown immunoreactivity in tumor cells, with prominent nuclear and cytoplasmic staining. The inset secondary antibody negative control shows minimal background signal. HIER was performed by boiling tissue sections in pH 9, 10 mM Tris with 1 mM EDTA for 20 min followed by cooling before antibody testing.



Heat Shock 70 kDa Protein 1B Antibody HSPA1B/7626 Detection in T-47D and HEK293 Cells WB. Western blot testing of human T-47D and HEK293 cell lysates with Heat Shock 70 kDa Protein 1B Antibody clone HSPA1B/7626 shows discrete bands at approximately 70 kDa in both samples, consistent with the expected molecular weight of HSPA1B. Minimal additional signal is visible, with comparable migration of the detected protein in both human cell lines.



Purified Heat Shock 70 kDa Protein 1B Antibody HSPA1B/7626 SDS-PAGE. SDS-PAGE analysis of 2 ug purified, BSA-free Heat Shock 70 kDa Protein 1B Antibody clone HSPA1B/7626 under non-reducing (NR) and reducing (R) conditions. The non-reduced antibody migrates predominantly above 100 kDa, while reduction produces the expected immunoglobulin heavy and light chain bands at approximately 50 and 25 kDa, respectively, consistent with the electrophoretic profile of purified mouse IgG.

Description

Heat Shock 70 kDa Protein 1B Antibody / HSP70-1B Antibody recognizes HSPA1B, a stress-inducible member of the HSP70 molecular chaperone family. HSPA1B is highly homologous to HSPA1A and contributes to the cellular response to conditions that disrupt normal protein folding. Induction of HSP70 family chaperones increases cellular capacity to stabilize non-native proteins and maintain protein homeostasis during environmental and physiological stress.

HSPA1B encodes an approximately 70 kDa protein composed of an N-terminal nucleotide-binding domain and a C-terminal substrate-binding domain. ATP binding and hydrolysis drive conformational changes that regulate the association and release of client proteins. Co-chaperones further influence this cycle by controlling ATPase activity, nucleotide exchange and substrate interactions. Through these coordinated mechanisms, HSP70-1B can bind exposed hydrophobic regions of unfolded or partially folded proteins, limit inappropriate aggregation and facilitate productive protein refolding.

Heat Shock 70 kDa Protein 1B participates in a broader protein quality-control network that enables cells to respond to proteotoxic stress. Its expression can increase following heat shock, oxidative stress and other challenges to proteome integrity. When damaged proteins cannot be successfully refolded, HSP70 chaperones can also cooperate with cellular degradation systems, helping determine whether proteins are recovered or removed.

HSPA1B and related inducible HSP70 proteins have been studied extensively in cancer biology. Tumor cells commonly encounter hypoxia, altered metabolism, oxidative stress and elevated demands on protein synthesis and folding. Increased molecular chaperone activity can help cells adapt to these conditions. HSP70 family proteins have therefore been investigated in connection with tumor cell survival, apoptosis, treatment response and mechanisms that allow malignant cells to tolerate cellular stress.

NSJ Bioreagents offers this mouse monoclonal Heat Shock 70 kDa Protein 1B Antibody as clone HSPA1B/7626. The antibody was generated using a recombinant region of human HSPA1B within amino acids 400-600. Because HSPA1A and HSPA1B are exceptionally homologous and the precise epitope recognized by clone HSPA1B/7626 is not disclosed, the immunogen information alone does not establish exclusion of HSPA1A. A Heat Shock 70 kDa Protein 1B Antibody provides a research tool for investigating HSPA1B, molecular chaperone biology, proteostasis and cellular stress responses.

For an additional monoclonal antibody to HSPA1B, see our HSPA1B Antibody / Heat Shock Protein 70 1B Antibody page.

Application Notes

Optimal dilution of the Heat Shock 70 kDa Protein 1B Antibody / HSP70-1B Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 400-600) from the human protein was used as the immunogen for the Heat shock 70 kDa protein 1B antibody.

Storage

Aliquot the Heat shock 70 kDa protein 1B antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

HSPA1B antibody, HSP70-1B antibody, HSP70-2 antibody, Heat shock protein 70 1B antibody, HSP72 antibody

Copyright © NSJ Bioreagents. All rights reserved.