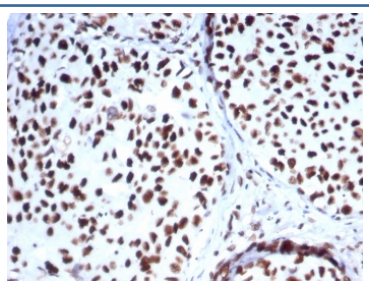
HSP70-2 Antibody / HSPA1B Protein Antibody [clone HSPA1B/7625] (V5117)

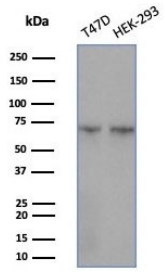
Catalog No.	Formulation	Size
V5117-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5117-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5117SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

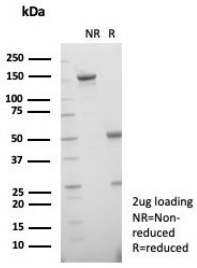
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	HSPA1B/7625
Purity	Protein A/G affinity
UniProt	P0DMV9
Localization	Cytoplasm, Nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Western blot: 1-2ug/ml
Limitations	This HSP70-2 Antibody / HSPA1B Protein Antibody is available for research use only.



HSP70-2 Antibody HSPA1B/7625 Staining of Human Breast Carcinoma IHC. Immunohistochemistry testing of FFPE human breast carcinoma tissue with HSP70-2 Antibody clone HSPA1B/7625 shows strong brown immunoreactivity in tumor cells, with prominent nuclear and cytoplasmic staining. 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.



HSP70-2 Antibody HSPA1B/7625 Detection in T-47D and HEK293 Cells WB. Western blot testing of human T-47D and HEK293 cell lysates with HSP70-2 Antibody clone HSPA1B/7625 shows discrete bands at approximately 70 kDa in both samples, consistent with the expected molecular weight of HSPA1B. The blot shows minimal background and similar migration of the detected protein in both human cell lines.



Purified HSP70-2 Antibody HSPA1B/7625 SDS-PAGE. SDS-PAGE analysis of 2 ug purified, BSA-free HSP70-2 Antibody clone HSPA1B/7625 under non-reducing (NR) and reducing (R) conditions. The non-reduced antibody migrates predominantly above 100 kDa, while reduction produces the expected immunoglobulin heavy chain band at approximately 50 kDa; the light chain is faint at approximately 25 kDa. The electrophoretic profile is consistent with purified mouse IgG.

Description

HSP70-2 Antibody / HSPA1B Protein Antibody recognizes HSPA1B, a member of the HSP70 molecular chaperone family associated with the inducible cellular stress response. HSPA1B is highly homologous to HSPA1A and encodes an approximately 70 kDa chaperone that contributes to protein quality control. Expression of inducible HSP70 proteins can increase when cells encounter conditions that disrupt protein folding, providing additional capacity to stabilize damaged or non-native proteins.

HSPA1B contains an N-terminal nucleotide-binding domain and a C-terminal substrate-binding domain. ATP binding and hydrolysis regulate conformational changes that control interactions between HSP70-2 and client proteins. This cycle is further regulated by co-chaperones that influence ATPase activity, nucleotide exchange and substrate selection. Through these coordinated interactions, HSPA1B can recognize exposed hydrophobic regions of unfolded or partially folded proteins, reduce inappropriate protein aggregation and facilitate productive refolding.

HSP70-2 functions within a larger cellular network responsible for maintaining proteome integrity. During heat shock, oxidative stress and other proteotoxic conditions, increased chaperone activity helps cells manage proteins whose structures have been disrupted. HSPA1B Protein also cooperates functionally with protein degradation mechanisms when damaged proteins cannot be restored, linking molecular chaperone activity with broader protein quality-control systems.

Inducible HSP70 proteins have been widely investigated in cancer biology because malignant cells frequently experience conditions that challenge protein homeostasis. Hypoxia, oxidative stress, altered metabolism and increased protein synthesis can create substantial demand for molecular chaperone activity. HSPA1B and related HSP70 proteins have therefore been studied in connection with tumor cell survival, apoptosis, adaptation to stress and responses to therapeutic intervention.

NSJ Bioreagents offers this mouse monoclonal HSP70-2 Antibody as clone HSPA1B/7625. 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/7625 is not disclosed, the immunogen information alone does not establish exclusion of HSPA1A. An HSP70-2 Antibody provides a research tool for investigating HSPA1B biology, molecular chaperone function, 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 HSP70-2 Antibody / HSPA1B Protein 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 HSP70-2 antibody.

Storage

Aliquot the HSP70-2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

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

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