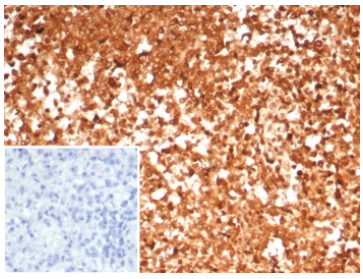
HSP90AA1 Antibody / HSP90 alpha [clone HSP90AA1/7426] (V4367)

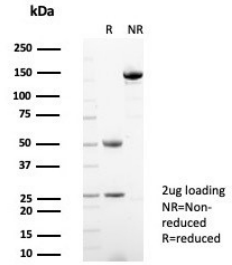
Catalog No.	Formulation	Size
V4367-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4367-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4367SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	HSP90AA1/7426
Purity	Protein A/G affinity
UniProt	P07900
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This HSP90AA1 antibody is available for research use only.



HSP90AA1 Antibody Spleen IHC. Immunohistochemistry staining of FFPE human spleen tissue using HSP90AA1 Antibody / Molecular Chaperone Antibody (clone HSP90AA1/7426) demonstrates strong diffuse cytoplasmic HRP-DAB brown staining throughout splenic lymphoid cell populations. The staining pattern is consistent with expression of HSP90AA1 (HSP90 alpha), a highly conserved ATP-dependent molecular chaperone that regulates protein folding, stabilization of client proteins, signal transduction, and maintenance of cellular homeostasis. HSP90AA1 is broadly expressed in immune cells where it supports proteostasis, stress-response pathways, and the functional activity of numerous signaling proteins. The inset image shows the negative control in which PBS was used in place of the primary antibody. HIER was performed by boiling tissue sections in pH 9, 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to immunostaining.



SDS-PAGE analysis of purified, BSA-free HSP90AA1 antibody (clone HSP90AA1/7426) as confirmation of integrity and purity.

Description

HSP90AA1 Antibody / HSP90 alpha detects HSP90AA1, an ATP-dependent molecular chaperone that serves as a critical coordinator of protein maturation, signaling network stability, and cellular adaptability. HSP90 alpha is among the most extensively connected proteins within the eukaryotic proteome, interacting with a diverse collection of client proteins that influence growth, differentiation, metabolism, stress responses, and survival. Rather than functioning as a simple folding factor, HSP90 alpha acts as a molecular platform that helps organize and maintain complex regulatory pathways required for normal cellular function.

HSP90 alpha belongs to the heat shock protein 90 family, a group of highly conserved chaperones that preserve protein functionality under changing physiological conditions. Through ATP-driven conformational cycling, HSP90 alpha stabilizes proteins that might otherwise become inactive, misfolded, or targeted for degradation. Many signaling proteins are dependent upon HSP90 alpha for structural integrity, making the chaperone an important determinant of pathway activity and cellular responsiveness to external stimuli.

The biological importance of HSP90 alpha extends beyond protein quality control. By influencing the stability of signaling molecules, transcriptional regulators, and receptor-associated proteins, HSP90 alpha indirectly regulates gene expression, cellular communication, and adaptive responses. This broad regulatory influence allows HSP90 alpha to participate in diverse biological processes ranging from embryonic development and tissue maintenance to cellular recovery following environmental stress or injury.

HSP90 alpha is widely expressed in normal tissues and is frequently enriched in highly active cell populations that require robust protein turnover and signaling capacity. The protein contributes to maintenance of proteome integrity by helping cells accommodate fluctuations in metabolic demand, environmental conditions, and intracellular signaling activity. These functions have established HSP90 alpha as a key component of cellular resilience mechanisms that support long-term viability and functional stability.

Because numerous disease-associated proteins rely upon HSP90 alpha for proper activity, the chaperone has become a major focus of biomedical research. HSP90AA1 has been investigated in studies of cancer, neurodegeneration, inflammation, tissue remodeling, and stress-associated cellular dysfunction. Its broad influence on protein stability and signaling network architecture has made it an important target for understanding how cells adapt to both physiological and pathological challenges.

HSP90AA1 Antibody / HSP90 alpha, clone HSP90AA1/7426, is useful for researchers studying molecular chaperones, protein stability, proteostasis, signal transduction, cellular adaptation, stress-response pathways, and disease-associated regulatory mechanisms. Validation may include immunohistochemistry, western blotting, immunofluorescence, flow cytometry, ELISA, and related protein expression applications when supported by experimental data. As a master regulator of protein functionality and signaling network integrity, HSP90 alpha remains an important target for investigating the molecular foundations of cellular homeostasis and disease biology.

Learn more about HSP90AA1 expression, molecular chaperone function, protein folding, and cellular stress-response pathways on our HSP90AA1 Antibody / Heat Shock Protein 90 Alpha Antibody page.

Application Notes

Optimal dilution of the HSP90AA1 antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 500-700) from the human protein was used as the immunogen for the HSP90AA1 antibody.

Storage

Aliquot the HSP90AA1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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