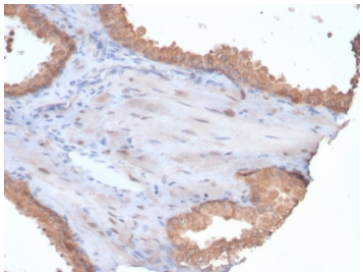
HSP90 alpha Antibody / HSP90AA1 [clone HSP90AA1/7247] (V4368)

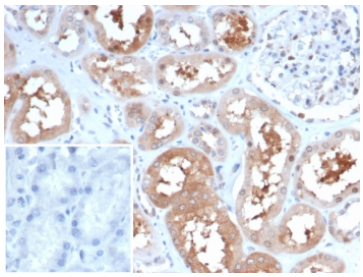
Catalog No.	Formulation	Size
V4368-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4368-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4368SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HSP90AA1/7247
Purity	Protein A/G affinity
UniProt	P07900
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This HSP90 alpha antibody is available for research use only.



HSP90 alpha Antibody Prostate IHC. Immunohistochemistry staining of FFPE human prostate tissue using HSP90 alpha Antibody / HSP90AA1 (clone HSP90AA1/7247) demonstrates strong cytoplasmic HRP-DAB brown staining within glandular epithelial cells lining prostatic acini and ducts. The staining pattern is consistent with expression of HSP90 alpha (HSP90AA1), a highly conserved ATP-dependent molecular chaperone involved in protein folding, stabilization of client proteins, signal transduction, and maintenance of cellular homeostasis. HSP90 alpha supports the functional activity of numerous regulatory proteins and is widely expressed in metabolically active epithelial tissues. 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.



HSP90 alpha Antibody Kidney IHC. Immunohistochemistry staining of FFPE human kidney tissue using HSP90 alpha Antibody / HSP90AA1 (clone HSP90AA1/7247) demonstrates strong cytoplasmic HRP-DAB brown staining within renal tubular epithelial cells, with comparatively weaker staining in surrounding stromal and glomerular compartments. The staining pattern is consistent with expression of HSP90 alpha (HSP90AA1), a highly conserved ATP-dependent molecular chaperone involved in protein folding, stabilization of client proteins, signal transduction, and maintenance of cellular homeostasis. HSP90 alpha is abundantly expressed in metabolically active epithelial cells where it supports proteostasis and the function 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.

Description

HSP90 alpha Antibody / HSP90AA1 (clone HSP90AA1/7247) detects HSP90AA1, a constitutively expressed member of the heat shock protein 90 family that functions as a central regulator of protein stability and cellular signaling. HSP90 alpha serves as an ATP-dependent molecular chaperone responsible for maintaining the structural integrity and functional activity of a diverse range of client proteins. Through these interactions, HSP90AA1 influences numerous biological pathways that govern cellular growth, differentiation, metabolism, and adaptation to changing environmental conditions.

Unlike many proteins that participate in a single signaling pathway, HSP90 alpha acts as a molecular hub that supports the activity of hundreds of client proteins across multiple cellular systems. These clients include kinases, transcription factors, hormone receptors, and other regulatory molecules that require chaperone assistance to achieve or maintain their active conformations. As a result, HSP90AA1 plays an important role in preserving signaling network stability and ensuring coordinated cellular responses to physiological stimuli.

HSP90 alpha is widely distributed throughout normal tissues and is particularly important in cells characterized by active protein synthesis, rapid proliferation, or complex signaling requirements. The protein works in conjunction with co-chaperones and quality-control machinery to monitor protein conformation, promote proper folding, and facilitate recovery from protein damage. These functions help maintain proteome integrity and contribute to long-term cellular fitness.

In addition to its role in protein maturation, HSP90AA1 contributes to cellular adaptation during periods of physiological stress. The protein supports stabilization of signaling molecules involved in survival pathways and assists in preserving protein functionality under conditions that might otherwise impair cellular activity. Because of these properties, HSP90 alpha is frequently investigated in studies of stress adaptation, protein homeostasis, and mechanisms that enable cells to maintain functionality under challenging biological conditions.

HSP90AA1 has attracted considerable interest in disease-related research because numerous proteins associated with tumor progression, inflammation, and cellular dysfunction depend upon HSP90-mediated stabilization. Altered expression or activity of HSP90 alpha has been reported in a variety of pathological settings, and modulation of HSP90 function remains an active area of therapeutic investigation. The broad biological influence of HSP90AA1 makes it a valuable marker for studying both normal cellular physiology and disease-associated molecular pathways.

HSP90 alpha Antibody / HSP90AA1, clone HSP90AA1/7247, is useful for researchers studying molecular chaperones, protein stability, signal transduction, cellular adaptation, proteostasis, stress-response mechanisms, and disease-associated regulatory networks. Validation may include immunohistochemistry, western blotting, immunofluorescence, flow cytometry, ELISA, and related protein expression applications when supported by experimental data. As a key regulator of protein functionality and signaling pathway integrity, HSP90AA1 remains an important target for understanding the molecular foundations of cellular homeostasis and adaptive biological responses.

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 HSP90 alpha 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 HSP90 alpha antibody.

Storage

Aliquot the HSP90 alpha antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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