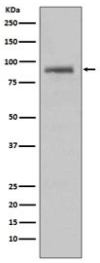
HSP90AA1 Antibody / HSP90 alpha [clone CCF-8] (RQ5193)

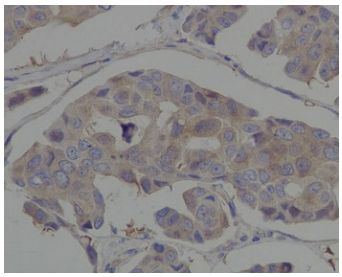
Catalog No.	Formulation	Size
RQ5193	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	CCF-8
Purity	Affinity purified
UniProt	P07900
Localization	Cell membrane, cytoplasmic, nuclear
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:50-1:200
Limitations	This HSP90AA1 antibody is available for research use only.



HSP90AA1 Antibody WB. Western blot analysis of human HeLa cell lysate using HSP90AA1 Antibody / Molecular Chaperone Antibody demonstrates a strong immunoreactive band at approximately 86-90 kDa, consistent with the predicted molecular weight of HSP90AA1. HSP90AA1 (HSP90 alpha) is a highly conserved ATP-dependent molecular chaperone that regulates protein folding, stabilization of client proteins, signal transduction, and maintenance of cellular homeostasis. As one of the most abundant intracellular chaperones, HSP90AA1 plays essential roles in proteostasis, cellular stress responses, and regulation of numerous signaling pathways. The observed band supports detection of HSP90AA1 in human cells by western blot analysis. Predicted molecular weight: approximately 86-90 kDa.



HSP90AA1 Antibody Breast Cancer IHC. Immunohistochemistry staining of FFPE human breast cancer tissue using HSP90AA1 Antibody / Molecular Chaperone Antibody demonstrates moderate cytoplasmic HRP-DAB brown staining within malignant epithelial tumor cells. 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 supports the activity of numerous signaling molecules involved in cellular proliferation, survival, and adaptation to tumor-associated stress, making it an important target in cancer biology and proteostasis research. HIER was performed by boiling tissue sections in pH 6, 10 mM citrate buffer for 10-20 minutes followed by cooling prior to immunostaining.

Description

HSP90AA1 Antibody / HSP90 alpha detects HSP90AA1, a member of the heat shock protein 90 family that functions as an ATP-dependent molecular chaperone essential for maintaining protein stability and cellular fitness. HSP90 alpha participates in the assembly, maturation, and conformational regulation of numerous client proteins, allowing cells to preserve functional signaling networks under both normal and stress-associated conditions. Because of its broad influence on protein activity, HSP90 alpha is considered a central regulator of cellular adaptation and proteome integrity.

Unlike chaperones that primarily assist newly synthesized proteins, HSP90 alpha is heavily involved in maintaining the activity of mature regulatory proteins that control critical cellular processes. Its client repertoire includes protein kinases, transcriptional regulators, hormone receptors, and signaling intermediates that influence proliferation, differentiation, metabolism, and survival. Through these interactions, HSP90 alpha acts as a molecular buffering system that helps cells maintain functional stability despite environmental fluctuations and physiological stress.

HSP90 alpha is expressed in a wide variety of tissues and cell types and is particularly important in cells with high metabolic demands or active signaling programs. The protein cooperates with co-chaperone complexes to regulate protein turnover, folding dynamics, and intracellular trafficking. These activities contribute to maintenance of cellular architecture and ensure that key regulatory proteins remain functional throughout changing biological conditions.

In addition to its intracellular chaperone functions, HSP90 alpha has been implicated in extracellular signaling and tissue remodeling processes. Studies have linked HSP90 alpha to wound repair, cellular migration, and adaptive responses to tissue injury, expanding its biological significance beyond traditional protein quality control pathways. These diverse functions have made HSP90 alpha an important subject of investigation across multiple research disciplines.

Because many disease-associated proteins rely on HSP90 alpha for stability and activity, the protein has become a major focus of translational and therapeutic research. Altered HSP90AA1 expression and function have been reported in cancer, inflammatory disorders, neurodegenerative diseases, and other conditions characterized by disrupted cellular homeostasis. As a result, HSP90 alpha serves as both a valuable biomarker and a key molecular target for studies aimed at understanding disease progression and cellular adaptation mechanisms.

HSP90AA1 Antibody / HSP90 alpha is useful for researchers investigating molecular chaperones, protein stability, cellular adaptation, signal transduction, stress-response pathways, tissue remodeling, 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 multifunctional regulator of protein activity and cellular resilience, HSP90 alpha remains an important target for understanding the molecular mechanisms that govern normal physiology and disease.

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 synthetic peptide specific to human HSP90 alpha / HSP90AA1 was used as the immunogen for the HSP90AA1 antibody.

Storage

Store the HSP90AA1 antibody at -20oC.

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