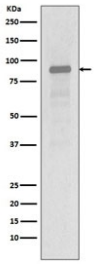
HSP90AA1 Antibody / HSP90 alpha [clone BAD-8] (RQ5192)

Catalog No.	Formulation	Size
RQ5192	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	BAD-8
Purity	Affinity purified
UniProt	P07900
Applications	Western blot: 1:500-1:2000
Limitations	This HSP90AA1 antibody is available for research use only.



Western blot testing of human Jurkat cell lysate with HSP90AA1 antibody. Predicted molecular weight: 86-90 kDa.

Description

HSP90AA1 Antibody / HSP90 alpha detects heat shock protein 90 alpha (HSP90AA1), a highly conserved ATP-dependent molecular chaperone that plays a critical role in protein folding, stabilization, intracellular trafficking, and maintenance of cellular homeostasis. HSP90 alpha is one of the most abundant molecular chaperones in eukaryotic cells and is required for the proper maturation and function of a wide range of client proteins. Through its interactions with signaling molecules, transcription factors, kinases, and hormone receptors, HSP90 alpha regulates numerous pathways involved in cellular growth, differentiation, survival, and stress adaptation.

HSP90 alpha belongs to the heat shock protein 90 family, a group of molecular chaperones responsible for maintaining protein quality control under both physiological and stress-associated conditions. The protein functions in cooperation with co-chaperones and accessory proteins to ensure correct protein conformation and functional stability. By preventing protein misfolding and aggregation, HSP90 alpha supports the integrity of cellular signaling networks and contributes to the maintenance of normal biological activity.

As a central component of the proteostasis machinery, HSP90 alpha helps cells respond to heat shock, oxidative stress, inflammation, toxicant exposure, and other environmental challenges. The protein promotes stabilization and refolding of damaged or partially unfolded proteins, allowing cells to adapt to changing physiological conditions. Because of these functions, HSP90 alpha is widely studied as a marker of cellular stress responses and protein homeostasis pathways.

HSP90 alpha also serves as a key regulator of signal transduction through its ability to stabilize numerous client proteins involved in growth and survival signaling. Many regulatory molecules depend upon HSP90 function for proper activity, placing the protein at the center of pathways controlling cell cycle progression, apoptosis, differentiation, and developmental processes. Consequently, HSP90 alpha is frequently investigated in studies of cancer biology, neuroscience, immunology, developmental biology, and cardiovascular research.

Altered expression or activity of HSP90 alpha has been associated with a variety of disease states. Increased HSP90 activity has been observed in many cancers, where it supports the stability of oncogenic proteins and promotes tumor cell survival. The protein has also been implicated in neurodegenerative disorders, inflammatory diseases, and conditions characterized by impaired protein homeostasis. These observations have established HSP90 alpha as an important target for both basic research and therapeutic development.

HSP90AA1 Antibody / HSP90 alpha is useful for researchers studying molecular chaperones, protein folding, cellular stress responses, signal transduction, proteostasis, cancer biology, and cell survival mechanisms. Validation may include immunohistochemistry, western blotting, immunofluorescence, flow cytometry, ELISA, and related protein expression applications when supported by experimental data. As one of the most important molecular chaperones in mammalian cells, HSP90 alpha remains a valuable target for understanding the mechanisms that regulate protein stability, cellular adaptation, and disease-associated biological pathways.

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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