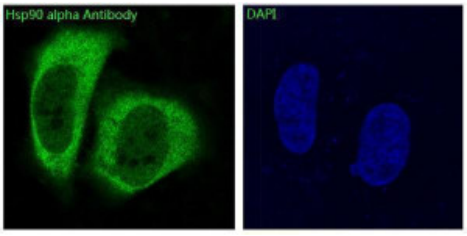
HSP90 alpha Antibody / HSP90AA1 [clone BAC-8] (RQ5191)

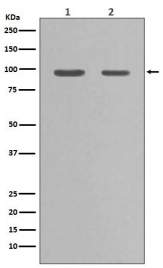
Catalog No.	Formulation	Size
RQ5191	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human, Rat
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	BAC-8
Purity	Affinity purified
UniProt	P07900
Applications	Western Blot : 1:500-1:2000 Immunofluorescence : 1:50-1:100
Limitations	This HSP90 alpha antibody is available for research use only.



HSP90 alpha Antibody BAC-8 in HeLa Cervical Cancer Cells IF. Immunofluorescence staining of HeLa human cervical cancer cells with HSP90 alpha Antibody / HSP90AA1, clone BAC-8, shows strong predominantly cytoplasmic staining, with enrichment around the perinuclear region and comparatively reduced signal within the nuclei. DAPI counterstaining (blue) identifies the nuclei and highlights the predominantly extranuclear distribution of HSP90 alpha.



Western blot testing of 1) rat PC-12 and 2) human HeLa cell lysate with HSP90 alpha antibody. Predicted molecular weight: 86-90 kDa.

Description

HSP90 alpha Antibody / HSP90AA1 detects heat shock protein 90 alpha (HSP90AA1), a highly conserved ATP-dependent molecular chaperone that plays a fundamental 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 diverse range of client proteins. Through its extensive interaction network, HSP90 alpha regulates signaling pathways involved in cellular growth, survival, differentiation, metabolism, and stress adaptation, making it one of the most extensively studied proteins in cell biology and biomedical research.

HSP90 alpha belongs to the heat shock protein 90 family, a group of molecular chaperones that assist in maintaining protein quality control under both normal and stress-associated conditions. The protein functions together with co-chaperones and accessory proteins to stabilize kinases, transcription factors, hormone receptors, and other signaling molecules. By ensuring proper protein conformation and activity, HSP90 alpha helps preserve the integrity of numerous cellular pathways that govern proliferation, apoptosis, differentiation, and developmental processes.

As a central component of the cellular proteostasis network, HSP90 alpha contributes to the stabilization and refolding of proteins damaged by heat shock, oxidative stress, inflammation, toxicant exposure, and other physiological challenges. These protective functions help cells adapt to changing environmental conditions while maintaining normal biological activity. Consequently, HSP90 alpha is widely utilized as a marker of cellular stress responses and protein homeostasis mechanisms.

HSP90 alpha also plays an important role in signal transduction through its ability to regulate the stability and activity of numerous client proteins. Many growth-promoting and survival-associated signaling molecules depend on HSP90 function for proper activity. Through these interactions, HSP90 alpha influences a broad range of biological processes and serves as a key regulator of cellular adaptation and survival. The protein is therefore frequently investigated in studies of cancer biology, developmental biology, neuroscience, immunology, and cardiovascular research.

Aberrant expression or activity of HSP90 alpha has been associated with a variety of pathological conditions. Elevated HSP90 activity has been reported in many human cancers, where it supports the stability of oncogenic signaling proteins and promotes tumor cell survival. HSP90 alpha has also been implicated in neurodegenerative diseases, inflammatory disorders, and conditions involving disrupted protein homeostasis. Because of its central role in maintaining protein function and cellular integrity, HSP90 alpha remains an important target for studies of disease mechanisms and therapeutic development.

HSP90 alpha Antibody / HSP90AA1 is useful for researchers studying molecular chaperones, protein folding, cellular stress responses, signal transduction, proteostasis, cancer biology, and cell survival pathways. Validation may include applications such as immunohistochemistry, western blotting, immunofluorescence, flow cytometry, ELISA, and related protein expression analyses when supported by experimental data. As a master regulator of protein stability and cellular homeostasis, HSP90 alpha continues to be a valuable target for understanding the molecular pathways that govern normal cellular function and disease-associated biological processes.

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

Storage

Store the Hsp90 alpha antibody at -20oC.

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