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Anti-Heat shock protein HSP 90-alpha (RABBIT) Antibody
HSP90 alpha Antibody
Catalog # ASR5353

Specification

Anti-Heat shock protein HSP 90-alpha (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Rat, Human, Mouse, Monkey, Chicken**
Clonality	**Polyclonal**
Application	**WB, IHC, E, I, LCI**
Application Note	**This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 90 kDa in size corresponding to Hsp90 protein by western blotting in the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 289-300 of human Hsp90 protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Heat shock protein HSP 90-alpha (RABBIT) Antibody - Additional Information

Gene ID 3320

Other Names
3320

Purity
This affinity-purified antibody is directed against human Hsp90 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross reactivity with Hsp90 from human, mouse, rat, monkey, chicken and Drosophila based on 100% homology with the immunizing sequence. Reactivity of this antibody with Hsp90 from other species is unknown.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Heat shock protein HSP 90-alpha (RABBIT) Antibody - Protein Information

Name HSP90AA1 (HGNC:5253)

Synonyms HSP90A, HSPC1, HSPCA

Function
Molecular chaperone that promotes the maturation, structural maintenance and proper regulation of specific target proteins involved for instance in cell cycle control and signal transduction. Undergoes a functional cycle that is linked to its ATPase activity which is essential for its chaperone activity. This cycle probably induces conformational changes in the client proteins, thereby causing their activation. Interacts dynamically with various co-chaperones that modulate its substrate recognition, ATPase cycle and chaperone function (PubMed:11274138, PubMed:12526792, PubMed:15577939, PubMed:15937123, PubMed:27353360, PubMed:29127155). Engages with a range of client protein classes via its interaction with various co-chaperone proteins or complexes, that act as adapters, simultaneously able to interact with the specific client and the central chaperone itself (PubMed:29127155). Recruitment of ATP and co-chaperone followed by client protein forms a functional chaperone. After the completion of the chaperoning process, properly folded client protein and co- chaperone leave HSP90 in an ADP-bound partially open conformation and finally, ADP is released from HSP90 which acquires an open conformation for the next cycle (PubMed:26991466, PubMed:27295069). Plays a critical role in mitochondrial import, delivers preproteins to the mitochondrial import receptor TOMM70 (PubMed:12526792). Apart from its chaperone activity, it also plays a role in the regulation of the transcription machinery. HSP90 and its co-chaperones modulate transcription at least at three different levels (PubMed:25973397). In the first place, they alter the steady-state levels of certain transcription factors in response to various physiological cues (PubMed:25973397). Second, they modulate the activity of certain epigenetic modifiers, such as histone deacetylases or DNA methyl transferases, and thereby respond to the change in the environment (PubMed:25973397). Third, they participate in the eviction of histones from the promoter region of certain genes and thereby turn on gene expression (PubMed:25973397). Binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory response, including TNF secretion by monocytes (PubMed:11276205). Antagonizes STUB1-mediated inhibition of TGF-beta signaling via inhibition of STUB1-mediated SMAD3 ubiquitination and degradation (PubMed:24613385). Mediates the association of TOMM70 with IRF3 or TBK1 in mitochondrial outer membrane which promotes host antiviral response (PubMed:20628368, PubMed:25609812).

Cellular Location

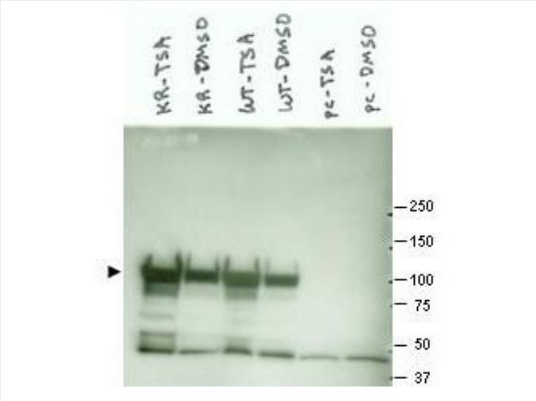
Nucleus {ECO:0000250|UniProtKB:P07901}. Cytoplasm {ECO:0000250|UniProtKB:P07901}. Melanosome. Cell membrane. Mitochondrion. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

Anti-Heat shock protein HSP 90-alpha (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Heat shock protein HSP 90-alpha (RABBIT) Antibody - Images



Western blot using Rockland's Affinity Purified anti-Hsp90 antibody shows detection of a band at ~90 kDa corresponding to Hsp90 in various lysate preparations (arrowhead). Cos7 transfected with mutant K294R Hsp90 (left two lanes), Cos7 transfected with wild type Hsp90 (middle two lanes) and empty vector Cos7 cells (right two lanes) were either treated with Trichostatin A (an HDAC inhibitor) or mock treated with DMSO only, as indicated. Transfected cells express either mutant or wt Hsp90 coupled to FlagTM tag. Anti-FlagTM immunoprecipitation was performed prior to western blotting with anti-Hsp90. Personal Communication, Brad Scroggins, Urologic Oncology Branch, CCR, NCI, Rockville, MD.

Anti-Heat shock protein HSP 90-alpha (RABBIT) Antibody - Background

This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. Hsp90 is a member of the heat shock protein 90 family that functions as a molecular chaperone and has ATPase activity. Hsp90 family proteins are highly conserved between isoforms and species. Several signal transduction pathways depend on Hsp90 function including erbB2, steroid hormone receptors (such as androgen, progesterone, glucocorticoid, and aryl-hydrocarbon), and hypoxia sensing (Hif1alpha). Recent reports show that tumor cells are more sensitive to Hsp90 inhibition and that Hsp90 from tumor cells is more sensitive to small molecule inhibitors (eg 17AAG). The mechanism of this differential sensitivity of normal versus tumor Hsp90 is not known (although mutation has been ruled out). One possible mechanism may be differences in post-translational modification of tumor Hsp90.