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HSP90AB1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5257

Product Information

Application	FC, IHC-P, WB
Primary Accession	P08238
Other Accession	P34058, P11499, Q4R4T5, Q04619, Q76LV1
Reactivity	Human, Rat
Predicted	Mouse, Rat, Monkey, Bovine, Chicken
Host	Rabbit
Clonality	Polyclonal
Calculated MW	83264
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	3326
Antigen Region	438-465
Other Names	HSP90AB1; HSP90B; HSPC2; HSPCB; Heat shock protein HSP 90-beta; Heat shock 84 kDa
Dilution	FC~~1:10~50 IHC-P~~1:100~500 WB~~ 1:1000
Target/Specificity	This HSP90AB1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 438-465 amino acids from the Central region of human HSP90AB1.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HSP90AB1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HSP90AB1 (HGNC:5258)
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 linked to its ATPase 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:16478993, PubMed:19696785). 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. 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). 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. They first alter the steady-state levels of certain transcription factors in response to various physiological cues. 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. Third, they participate in the eviction of histones from the promoter region of certain genes and thereby turn on gene expression (PubMed:25973397). Antagonizes STUB1- mediated inhibition of TGF-beta signaling via inhibition of STUB1- mediated SMAD3 ubiquitination and degradation (PubMed:24613385). Promotes cell differentiation by chaperoning BIRC2 and thereby protecting from auto-ubiquitination and degradation by the proteasomal machinery (PubMed:18239673). Main chaperone involved in the phosphorylation/activation of the STAT1 by chaperoning both JAK2 and PRKCE under heat shock and in turn, activates its own transcription (PubMed:20353823). Involved in the translocation into ERGIC (endoplasmic reticulum-Golgi intermediate compartment) of leaderless cargos (lacking the secretion signal sequence) such as the interleukin 1/IL-1; the translocation process is mediated by the cargo receptor TMED10 (PubMed:32272059).
Cellular Location	Cytoplasm. Melanosome Nucleus. Secreted. Cell membrane. Dynein axonemal particle {ECO:0000250|UniProtKB:Q6AZV1}. Cell surface. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065) Translocates with BIRC2 from the nucleus to the cytoplasm during differentiation (PubMed:18239673). Secreted when associated with TGFB1 processed form (LAP) (PubMed:20599762).

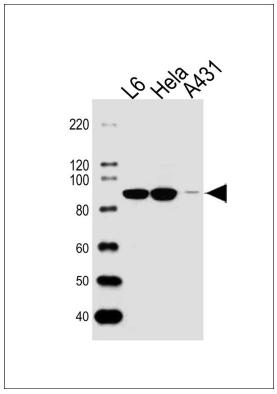
Background

HSPCB are highly conserved molecular chaperones that have key roles in signal transduction, protein folding, protein degradation, and morphologic evolution. This protein normally associate with other cochaperones and play important roles in folding newly synthesized proteins or stabilizing and refolding denatured proteins after stress.

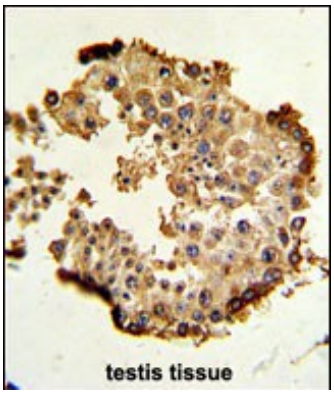
References

Hoffmann T., Hovemann B.Gene 74:491-501(1988)
Mason A., O'Connor D., Greenhalf W.Submitted (JUN-2000)
Wright L., Barril X., Dymock B.,Chem. Biol. 11:775-785(2004)

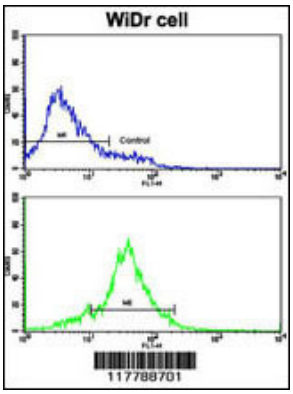
Images



Western blot analysis of lysates from rat L6,Hela,A431 cell line (from left to right), using HSP90AB1 Antibody (Center)(Cat. #AW5257). AW5257 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.



Formalin-fixed and paraffin-embedded human testis tissue reacted with HSP90AB1 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of WiDr cells using HSP90AB1 Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.