Data Sheet (Cat.No.TMAH-00570)

Anti-HSP90AA1 Antibody (2U228)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human, Rat
Conjugation:	Unconjugated
Clone:	2U228
Purification:	Affinity-chromatography

Applications

Verified Activity:

1. Western Blot
-Positive WB detected in: Hela whole cell lysate, MCF-7 whole cell lysate, K562 whole cell lysate, HL-60 whole cell lysate, HepG2 whole cell lysate, A549 whole cell lysate, Jurkat whole cell lysate, PC3 whole cell lysate, Rat brain tissue
-All lanes: Hsp90 alpha antibody at 0.8μg/ml
-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution
-Predicted band size: 85, 99 KDa
-Observed band size: 85 KDa
2. IHC image of TMAH-00570 diluted at 1:80 and staining in paraffin-embedded human endometrial cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.
3. IHC image of TMAH-00570 diluted at 1:80 and staining in paraffin-embedded human testis tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.
4. Immunofluorescence staining of NIH/3T3 cells with TMAH-00570 at 1:26, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).
5. Immunoprecipitating Hsp90 in Hela whole cell lysate
-Lane 1: Rabbit control IgG instead of TMAH-00570 in Hela whole cell lysate.
For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
-Lane 2: TMAH-00570 (3μg) + Hela whole cell lysate (500μg)
-Lane 3: Hela whole cell lysate (20μg)

Application:	ELISA,IF,IHC,IP,WB
Recommended	WB:1:500-1:5000; IHC:1:50-1:200; IF:1:20-1:200; IP:1:200-1:1000.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthetic peptide: Human HSP90AA1
Antigen Species:	Human
Gene ID:	3320
Uniprot ID:	P07900
Biology Area:	Signal Transduction

Research Background

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. 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. Plays a critical role in mitochondrial import, delivers preproteins to the mitochondrial import receptor TOMM70. 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. 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. Third, they participate in the eviction of histones from the promoter region of certain genes and thereby turn on gene expression. Binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory response, including TNF secretion by monocytes. Antagonizes STUB1-mediated inhibition of TGF-beta signaling via inhibition of STUB1-mediated SMAD3 ubiquitination and degradation. Mediates the association of TOMM70 with IRF3 or TBK1 in mitochodria outer membrane which promotes host antiviral response.

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