

### HSP90β Monoclonal Antibody(M2)

**Catalog # AP63371** 

### **Specification**

## HSP90β Monoclonal Antibody(M2) - Product Information

Application WB, IHC-P, IF Primary Accession P08238

Reactivity Human, Mouse, Rat

Host Mouse Clonality Monoclonal

# HSP90β Monoclonal Antibody(M2) - Additional Information

**Gene ID 3326** 

**Other Names** 

HSP90AB1; HSP90B; HSPC2; HSPCB; Heat shock protein HSP 90-beta; HSP 90; Heat shock 84 kDa;

HSP 84; HSP84

**Dilution** 

WB~~WB: 1:1000-3000 IF 1:200 IHC 1:50-300

IHC-P~~N/A

IF~~WB: 1:1000-3000 IF 1:200 IHC 1:50-300

**Format** 

PBS, pH 7.4, containing 0.09% (W/V) sodium azide as Preservative and 50% Glycerol.

**Storage Conditions** 

-20°C

## HSP90β Monoclonal Antibody(M2) - 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:<a href="http://www.uniprot.org/citations/16478993" target="\_blank">16478993</a>, PubMed:<a href="http://www.uniprot.org/citations/19696785" target="\_blank">19696785</a>). 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:<a

href="http://www.uniprot.org/citations/26991466" target=" blank">26991466</a>, PubMed:<a href="http://www.uniprot.org/citations/27295069" target="blank">27295069</a>). 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: <a href="http://www.uniprot.org/citations/25973397" target=" blank">25973397</a>). Antagonizes STUB1- mediated inhibition of TGF-beta signaling via inhibition of STUB1- mediated SMAD3 ubiquitination and degradation (PubMed: <a href="http://www.uniprot.org/citations/24613385" target=" blank">24613385</a>). Promotes cell differentiation by chaperoning BIRC2 and thereby protecting from auto-ubiquitination and degradation by the proteasomal machinery (PubMed:<a href="http://www.uniprot.org/citations/18239673" target=" blank">18239673</a>). Main chaperone involved in the phosphorylation/activation of the STAT1 by chaperoning both JAK2 and

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:<a href="http://www.uniprot.org/citations/20353823" target="\_blank">20353823</a>). 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:<a href="http://www.uniprot.org/citations/32272059" target="\_blank">32272059</a>).

#### **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).

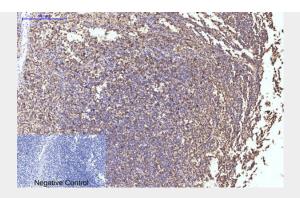
### HSP90β Monoclonal Antibody(M2) - Protocols

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

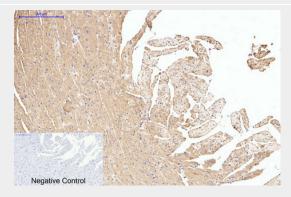
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## HSP90β Monoclonal Antibody(M2) - Images

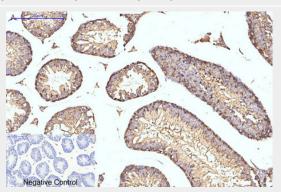




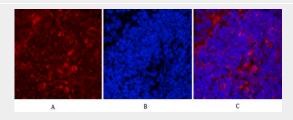
Immunohistochemical analysis of paraffin-embedded Human-Tonsil tissue. 1,HSP90β Monoclonal Antibody(M2) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Rat-heart tissue. 1,HSP90ß Monoclonal Antibody(M2) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.

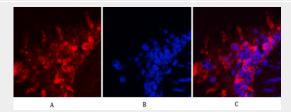


Immunohistochemical analysis of paraffin-embedded Mouse-testis tissue. 1,HSP90β Monoclonal Antibody(M2) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.

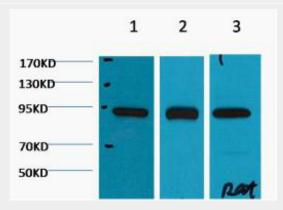




Immunofluorescence analysis of Mouse-spleen tissue. 1,HSP90β Monoclonal Antibody(M2)(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labled Secondary antibody was diluted at 1:300(room temperature, 50min).3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



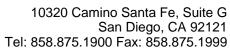
Immunofluorescence analysis of Rat-lung tissue. 1,HSP90 $\beta$  Monoclonal Antibody(M2)(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labled Secondary antibody was diluted at 1:300(room temperature, 50min).3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Western blot analysis of 1) Hela, 2) Mouse Brain tissue, 3) Rat Brain tissue, diluted at 1:2000.

# HSP90β Monoclonal Antibody(M2) - 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. 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:27295069, PubMed:26991466). 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. 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 that is 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).