PRODUCT INFORMATION

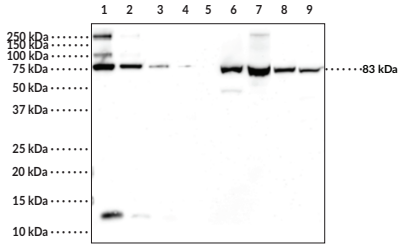
Hsp90β Polyclonal Antibody

Item No. 25730

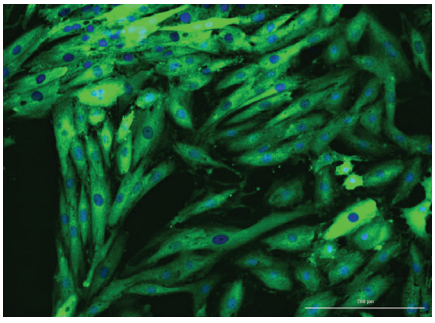
Overview and Properties

Contents:	This vial contains 500 µl of protein affinity-purified antibody.
Synonyms:	Heat shock 84 kDa, Heat Shock Protein 90β, Hsp 84
Immunogen:	Recombinant full-length human Hsp90β protein
Cross Reactivity:	(-) Hsp90α
Species Reactivity:	(+) Human, mouse, and rat; other species not tested
Uniprot No.:	P08238
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF), and Western blot (WB); the recommended starting dilution for ELISA is 1:500, 1:40 for IHC, and 1:200 for IF and WB. Other applications were not tested, therefore optimal working concentration/ dilution should be determined empirically.

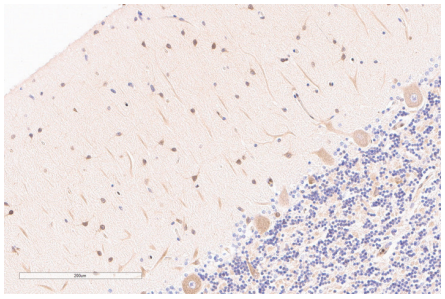
Images



Lane 1: Hsp90β Recombinant Protein (0.001 µg)
Lane 2: Hsp90β Recombinant Protein (0.005 µg)
Lane 3: Hsp90β Recombinant Protein (0.02 µg)
Lane 4: Hsp90β Recombinant Protein (0.1 µg)
Lane 5: Hsp90α Recombinant Protein (0.1 µg) [negative control]
Lane 6: A549 Cell Lysate (50 µg)
Lane 7: HeLa Heat Shock Cell Lysate (30 µg)
Lane 8: Mouse Kidney (40 µg)
Lane 9: Rat Intestine (40 µg)



Immunofluorescent staining of H9C2 (rat myoblast) cells. Hsp90β Polyclonal Antibody at dilution of 1:200 followed by Goat Anti-Rabbit IgG FITC (Item No. 10006588) (green) and Hoechst nuclear stain (blue).



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human cerebellum tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Hsp90β polyclonal antibody, (Item No. 25730), at a 1:40 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION

Description

Heat shock protein 90 β (Hsp90β) is the constitutively active cytosolic isoform of Hsp90 that is encoded by *HSP90AB* in humans.[1] Hsp90 is a multidomain protein that functions as a molecular chaperone to assist in folding and activation of nascent peptides, refolding unfolded or misfolded proteins, and preventing protein aggregation.[2] C-terminal dimerization of Hsp90, coupled with ATPase molecular clamp activity induces a conformational change in the N-terminal nucleotide binding domain that facilitates substrate binding and initiates the chaperone cycle.[3] Hsp90 interacts with many co-chaperones during its chaperone cycle including p23 and Sba1, which help recruit substrates to the Hsp90 complex, Hsp70 (Item Nos. 22739 | 23002), which loads nascent polypeptides onto the Hsp90 dimer, and the ATPase activator Aha1 that promotes ATP hydrolysis and substrate release.[4,5] Hsp90 is overexpressed in cancer cells and stabilizes client proteins that promote oncogenesis, including transcription factors, signaling proteins, and kinases.[1,5] Hsp90 also decreases α-synuclein fibril formation and toxicity as well as Q35 aggregation in *in vitro* models of Parkinson's and Huntington's disease, respectively, implying a role in neurodegenerative disease.[6] Cayman's Hsp90β Polyclonal Antibody can be used for Western blot, ELISA, IHC, and IF applications. This antibody recognizes Hsp90β at 83 kDa from human, mouse, and rat samples.

References

1. Chen, B., Piel, W.H., Gui, L., *et al.* The HSP90 family of genes in the human genome: Insights into their divergence and evolution. *Genomics* **86(6)**, 627-637 (2005).
2. Fink, A.L. Chaperone-mediated protein folding. *Physiol. Rev.* **79(2)**, 425-449 (1999).
3. Prodromou, C., Panaretou, B., Chohan, S., *et al.* The ATPase cycle of Hsp90 drives a molecular 'clamp' via transient dimerization of the N-terminal domains. *EMBO J.* **19(16)**, 4383-4392 (2000).
4. Ali, M.M.U., Roe, S.M., Vaughan, C.K., *et al.* Crystal structure of an Hsp90-nucleotide-p23/Sba1 closed chaperone complex. *Nature* **440(7087)**, 1013-1017 (2006).
5. Li, J. and Buchner, J. Structure, function and regulation of the hsp90 machinery. *Biomed. J.* **36(3)**, 106-117 (2013).
6. Lackie, R.E., Maciejewski, A., Ostapchenko, V.G., *et al.* The Hsp70/Hsp90 chaperone machinery in neurodegenerative diseases. *Front. Neurosci.* **11:254**, (2017).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM