ARG20504
anti-Hsp 90 antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Hsp 90
Tested Reactivity	Hu, Ms, Rat
Tested Application	ELISA, ICC/IF, IHC-P, IP, WB
Host	Rabbit
Clonality	Polyclonal
Target Name	Hsp 90
Species	Human
Immunogen	Full length of Human Hsp90 protein (NP_031381.2).
Conjugation	Un-conjugated
Alternate Names	HSPC2; D6S182; Heat shock 84 kDa; HSP90B; HSP84; HSP 84; Heat shock protein HSP 90-beta; HSP 90; HSPCB

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
ICC/IF	1:100
IHC-P	1:100
IP	Assay-dependent
WB	1:500

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

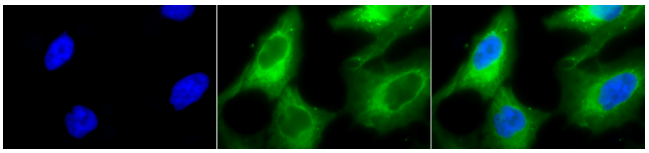
Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	Rabbit antiserum
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

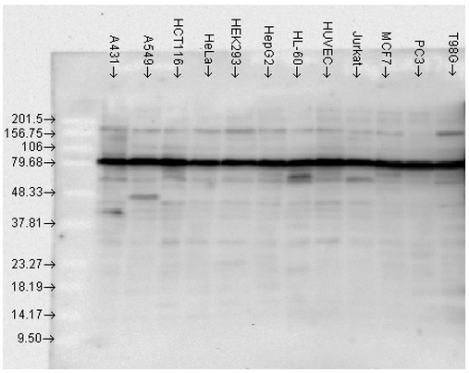
Gene Symbol	HSP90AB1
Gene Full Name	heat shock protein 90kDa alpha (cytosolic), class B member 1
Background	Hsp90 is a highly conserved and essential stress protein that is expressed in all eukaryotic cells. From a functional perspective, hsp90 participates in the folding, assembly, maturation, and stabilization of specific proteins as an integral component of a chaperone complex (1-4). Despite its label of being a heat-shock protein, hsp90 is one of the most highly expressed proteins in unstressed cells (1–2% of cytosolic protein). It carries out a number of housekeeping functions – including controlling the activity, turnover, and trafficking of a variety of proteins. Most of the hsp90-regulated proteins that have been discovered to date are involved in cell signaling (5-6). The number of proteins now know to interact with Hsp90 is about 100. Target proteins include the kinases v-Src, Wee1, and c-Raf, transcriptional regulators such as p53 and steroid receptors, and the polymerases of the hepatitis B virus and telomerase.5. When bound to ATP, Hsp90 interacts with co-chaperones Cdc37, p23, and an assortment of immunophilin-like proteins, forming a complex that stabilizes and protects target proteins from proteasomal degradation. In most cases, hsp90-interacting proteins have been shown to co-precipitate with hsp90 when carrying out immunoadsorption studies, and to exist in cytosolic heterocomplexes with it. In a number of cases, variations in hsp90 expression or hsp90 mutation has been shown to degrade signaling function via the protein or to impair a specific function of the protein (such as steroid binding, kinase activity) in vivo. Ansamycin antibiotics, such as geldanamycin and radicicol, inhibit hsp90 function (7). 1. Arlander S.J.H., et al. (2003) J Biol Chem 278: 52572-52577. 2. Pearl H., et al. (2001) Adv Protein Chem 59:157-186. 3. Neckers L., et al. (2002) Trends Mol Med 8:S55-S61. 4. Pratt W., Toft D. (2003) Exp Biol Med 228:111-133. 5. Pratt W., Toft D. (1997) Endocr Rev 18: 306–360. 6. Pratt W.B. (1998) Proc Soc Exptl Biol Med 217: 420–434. 7. Whitesell L., et al. (1994) Proc Natl Acad Sci USA 91: 8324– 8328.
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. 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. [UniProt]
Research Area	Cancer antibody; Signaling Transduction antibody
Calculated Mw	83 kDa
PTM	Ubiquitinated in the presence of STUB1-UBE2D1 complex (in vitro). ISGylated. S-nitrosylated; negatively regulates the ATPase activity. Phosphorylation at Tyr-301 by SRC is induced by lipopolysaccharide (PubMed:23585225). Phosphorylation at Ser-226 and Ser-255 inhibits AHR interaction (PubMed:15581363). Methylated by SMYD2; facilitates dimerization and chaperone complex formation; promotes cancer cell proliferation. Cleaved following oxidative stress resulting in HSP90AB1 protein radicals formation; disrupts the chaperoning function and the degradation of its client proteins.

Images



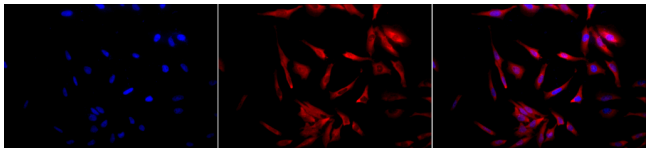
ARG20504 anti-Hsp 90 antibody ICC/IF image

Immunofluorescence: Heat Shocked (42°C for 1 hour) HeLa cells. Fixation: 2% Formaldehyde for 20 min at RT. Primary antibody: ARG20504 anti-Hsp 90 antibody at 1:100 for 12 hours at 4°C. Secondary antibody: FITC Goat anti-Rabbit (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Magnification: 100x. Left: DAPI (blue) nuclear stain. Middle: Primary antibody. Right: Composite.



ARG20504 anti-Hsp 90 antibody WB image

Western blot: A431, A549, HCT116, HeLa, HEK293, HepG2, HL-60, HUVEC, Jurkat, MCF7, PC3, and T98G cell lysates stained with ARG20504 anti-Hsp 90 antibody.



ARG20504 anti-Hsp 90 antibody ICC/IF image

Immunofluorescence: Heat Shocked (42°C for 1 hour) HeLa cells. Fixation: 2% Formaldehyde for 20 min at RT. Primary antibody: ARG20504 anti-Hsp 90 antibody at 1:100 for 12 hours at 4°C. Secondary antibody: APC Goat anti-Rabbit (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Magnification: 20x. Left: DAPI (blue) nuclear stain. Middle: Primary antibody. Right: Composite.
