

DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human HSP90 $\alpha$ in Western blots. In Western blots no cross-reactivity with recombinant human HSP90 $\beta$ is observed.
<b>Source</b>	Polyclonal Rabbit IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Human HSP90 $\alpha$ isoform 1 synthetic peptide Asp702-Met716 Accession # P07900
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 $\mu$ m filtered solution in PBS.

APPLICATIONS		
<b>Please Note:</b> Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.5 $\mu$ g/mL	See Below
<b>Knockout Validated</b>	HSP90 $\alpha$ is specifically detected in HEK293T human embryonic kidney parental cell line but is not detectable in HSP90 $\alpha$ knockout HEK293T cell line.	

DATA	
<p><b>Western Blot</b></p> <p><b>Detection of Human HSP90<math>\alpha</math> by Western Blot.</b> Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line. PVDF membrane was probed with 0.5 <math>\mu</math>g/mL of Rabbit Anti-Human HSP90<math>\alpha</math> Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7247) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). For additional reference, recombinant human HSP90<math>\alpha</math> and recombinant human HSP90<math>\beta</math> (5 ng/lane) were included. A specific band was detected for HSP90<math>\alpha</math> at approximately 90 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Knockout Validated</b></p> <p><b>Western Blot Shows Human HSP90<math>\alpha</math> Specificity by Using Knockout Cell Line.</b> Western blot shows lysates of HEK293T human embryonic kidney parental cell line and HSP90<math>\alpha</math> knockout HEK293T cell line (KO). PVDF membrane was probed with 0.5 <math>\mu</math>g/mL of Rabbit Anti-Human HSP90<math>\alpha</math> Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7247) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for HSP90<math>\alpha</math> at approximately 96 kDa (as indicated) in the parental HEK293T cell line, but is not detectable in knockout HEK293T cell line. GAPDH (Catalog # AF5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>

PREPARATION AND STORAGE	
<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

The heat shock protein-90 kDa (HSP90) is a composite name for a large group of genes whose molecular weights average 90 kDa. HSP90 functions primarily as a molecular chaperone, facilitating the folding of other cellular proteins, preventing protein aggregation, or targeting improperly folded proteins to specific degradative pathways. HSP90 is ubiquitously expressed, highly conserved and accounts for 1-2% of the total cellular protein. Recently introduced, standardized nomenclature has divided the 17 identified HSP90 genes into three related and one unrelated classes, HSP90AA1, HSP90AB, HSP90BB, and TRAP, respectively. Six of these genes were functional while the remaining 11 are considered putative pseudogenes. Eukaryotic cells have two principal forms of HSP90. The AF7247 antibody described here is specific to HSP90 the inducible form, HSP90AA1, also known as HSP90 $\alpha$ , HSP90A, HSPC1, HSPCA and HSP86. The other form is a constitutively expressed HSP90AB1 that is a 724 amino acid protein that is also known as HSP90- $\beta$ , HSP90B, HSPCB, HSPC2, and HSP89- $\beta$ . HSP90AB1-1 and HSP90AA share 90% identity. In addition to its role as a molecular chaperone and stress response protein, HSP90 is a central component in a number of basic cellular processes including hormone signaling and cell cycle control.