

# Human/Mouse/Rat HSP27 Antibody

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: AF15801

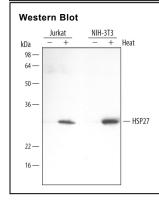
DESCRIPTION		
Species Reactivity	Human/Mouse/Rat	
Specificity	Detects human, mouse and rat HSP27.	
Source	Polyclonal Goat IgG	
Purification	Antigen Affinity-purified	
Immunogen	E. coli-derived recombinant human HSP27 Thr2-Lys205 Accession # P04792	
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.	

#### **APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 μg/mL	See Below

#### DATA



Detection of Human and Mouse HSP27 by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line and NIH-3T3 mouse embryonic fibroblast cell line untreated (-) or treated (+) with a 42 °C heat shock for 30 minutes with a 3 hour recovery. PVDF membrane was probed with 0.1 μg/mL of Human/Mouse/Rat HSP27 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF15801), followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for HSP27 at approximately 27 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

## PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.		
Shipping	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 $^{\circ}$ C		
	"Small pack size (-SP) is snipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C		

#### Stability & Storage

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
  - 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

### BACKGROUND

Heat shock proteins (HSPs) are a family of highly conserved stress response proteins. Heat shock proteins function primarily as molecular chaperones by facilitating the folding of other cellular proteins, preventing protein aggregation or targeting improperly folded proteins to specific degradative pathways. HSPs are typically expressed at low levels under normal physiological conditions but are dramatically up-regulated in response to cellular stress. Elevated levels of HSPs have been observed in association with ischemia/reperfusion, cancer, and chronic heart failure. HSP27, also known as HSPB1, is a member of the small heat shock protein family, which also includes HSP25 and the α-crystallins. HSP27 forms a large oligomer and the extent of phosphorylation plays a role in determining specific functions. HSP27 also functions as an anti-apoptotic molecule, regulating apoptosis through direct interaction with key components of the apoptotic pathway. HSP27 binds and sequesters cytochrome c released from the mitochondria in response to an apoptotic stimulus. This prevents the proper assembly of the apoptosome and subsequently, the activation of procaspase-9 and procaspase-3.

## References:

- 1. Gusev, N.B. et al. (2002) Biochemistry (Moscow) 67:511.
- 2. Garrido, C. et al. (2001) Biochem. Biophys. Res. Commun. 286:433.
- 3. Garrido, C. (2002) Cell Death Diffr. 9:483.
- 4. Brvey, J-M. et al. (2000) Nat. Cell Biol. 2:645.

