

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects the induced form of recombinant endogenous human, mouse and rat HSP70/HSPA1A (HSP72) in Western blots. In Western blots, no cross-reactivity with the constitutively expressed HSC70 (HSP73) is detected.
Source	Polyclonal Rabbit IgG
Purification	Antigen and protein A Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human HSP70 Met1-Asp641 Accession # P08107
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.

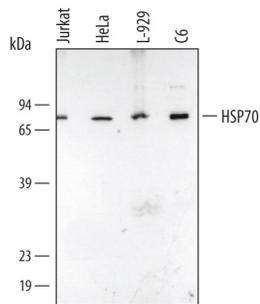
APPLICATIONS

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
Simple Western	0.5 µg/mL	See Below

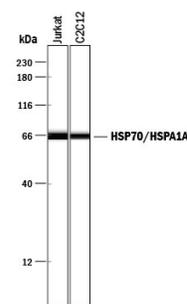
DATA

Western Blot



Detection of Human, Mouse, and Rat HSP70/HSPA1A by Western Blot.
Western blot shows lysates of Jurkat human acute T cell leukemia cell line, HeLa human cervical epithelial carcinoma cell line, L-929 mouse fibroblast cell line, and C6 rat glioma cell line. PVDF membrane was probed with 0.1 µg/mL of Rabbit Anti-Human/Mouse/Rat HSP70/HSPA1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1663) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for HSP70/HSPA1A at approximately 72 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

Simple Western



Detection of Human and Mouse HSP70/HSPA1A by Simple Western™.
Simple Western lane view shows lysates of Jurkat human acute T cell leukemia cell line and C2C12 mouse myoblast cell line, loaded at 0.2 mg/mL. A specific band was detected for HSP70/HSPA1A at approximately 66 kDa (as indicated) using 0.5 µg/mL of Rabbit Anti-Human/Mouse/Rat HSP70/HSPA1A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1663). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



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 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 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. HSP70 is a 72 kDa member of the heat shock protein 70 family of proteins. HSP70, also known as HSPA1A, HSP70-1, and HSP72 is a 641 amino acid (aa) heat shock protein. Over aa 1-641, human HSP70 shares 95% and 97% aa identity to mouse and rat HSP70.