

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat HSPA8 in Western blots.
Source	Monoclonal Mouse IgG ₃ Clone # 521503
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human HSPA8 Asp534-Gly615 Accession # P11142
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.

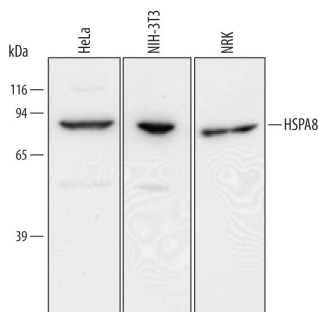
APPLICATIONS

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
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below
Simple Western	1 µg/mL	See Below

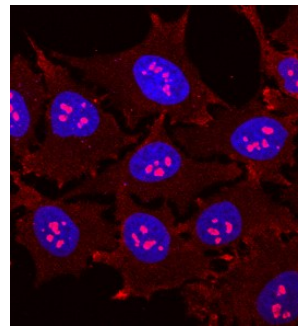
DATA

Western Blot



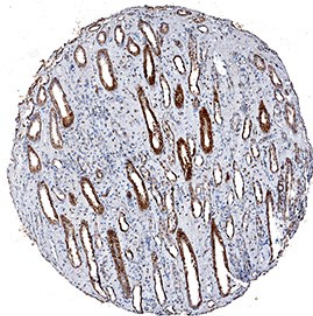
Detection of Human/Mouse/Rat HSPA8/HSC71 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, NIH-3T3 mouse embryonic fibroblast cell line, and NRK rat normal kidney cell line. PVDF membrane was probed with 0.1 µg/mL of Mouse Anti-Human/Mouse/Rat HSPA8/HSC71 Monoclonal Antibody (Catalog # MAB4148) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for HSPA8/HSC71 at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 2*.

Immunocytochemistry



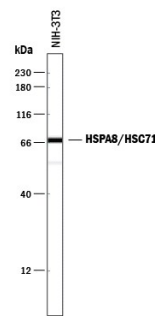
HSPA8/HSC71 in HeLa Human Cell Line. HSPA8/HSC71 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human/Mouse/Rat HSPA8/HSC71 Monoclonal Antibody (Catalog # MAB4148) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to nuclei, especially nucleoli. View our protocol for *Fluorescent ICC Staining of Cells on Coverslips*.

Immunohistochemistry



HSPA8/HSC71 in Human Kidney. HSPA8/HSC71 was detected in immersion fixed paraffin-embedded sections of human kidney using Mouse Anti-Human/Mouse/Rat HSPA8/HSC71 Monoclonal Antibody (Catalog # MAB4148) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to epithelial cells in convoluted tubules. View our protocol for *IHC Staining with VisUCyte HRP Polymer Detection Reagents*.

Simple Western



Detection of Mouse HSPA8/HSC71 by Simple Western™. Simple Western lane view shows lysates of NIH-3T3 mouse embryonic fibroblast cell line, loaded at 0.2 mg/mL. A specific band was detected for HSPA8/HSC71 at approximately 93 kDa (as indicated) using 1 µg/mL of Mouse Anti-Human/Mouse/Rat HSPA8/HSC71 Monoclonal Antibody (Catalog # MAB4148). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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

The 70 kDa heat shock proteins (HSP70s) are a highly conserved family of stress response proteins. The HSP70 family of proteins contains both heat/stress inducible and constitutively expressed members known as heat shock cognate proteins. Heat Shock 70 kDa Protein 8 (HSPA8), also known as Heat Shock Cognate Protein 71 (HSC71), HSC70, HSP73, HSPA10 and LPS-associated protein 1 (LAP1), is a 646 amino acid (aa) heat shock cognate protein. Many HSPs function as molecular chaperones, facilitating the folding of other cellular proteins. HSPA8 plays an important role in cells by transiently associating with nascent polypeptides to facilitate correct folding. HSPA8 is a ubiquitously expressed protein and rapidly translocates from the cytoplasm to the nucleus in response to heat shock. Two alternatively spliced variants have been identified. This antibody detects isoform 1 but not isoform 2 (HSC54). Human HSPA8 shares greater than 99% identity with mouse and rat HSPA8.