

## DESCRIPTION

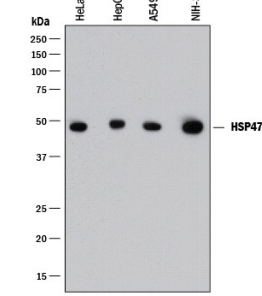
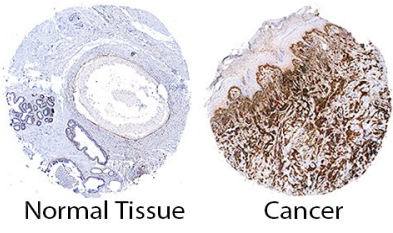
<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human and mouse HSP47 in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 950806
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human HSP47 Ala19-Asp412 Accession # P50454
<b>Formulation</b>	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
<b>Western Blot</b>	0.1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-25 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human and Mouse HSP47 by Western Blot.</b> Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, HepG2 human hepatocellular carcinoma cell line, A549 human lung carcinoma cell line, and NIH-3T3 mouse embryonic fibroblast cell line. PVDF membrane was probed with 0.1 µg/mL of Mouse Anti-Human/Mouse HSP47 Monoclonal Antibody (Catalog # MAB9166) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for HSP47 at approximately 47 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>HSP47 in Human Breast Cancer Tissue.</b> HSP47 was detected in immersion fixed paraffin-embedded sections of human normal breast (left) and breast cancer tissue (right) using Mouse Anti-Human/Mouse HSP47 Monoclonal Antibody (Catalog # MAB9166) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to cancer cell cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<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

Heat Shock Protein 47 (HSP47), also known as Serpin-H1/CBP1/CBP2, is localized to endoplasmic reticulum (ER), where it is a collagen-specific molecular chaperone. In the ER, HSP47 interacts with and stabilizes correctly-folded procollagen. Nucleotide polymorphisms may be associated with preterm birth and Osteogenesis Imperfecta type X. Serpin-H1 is up-regulated in several cancers including squamous cell carcinoma, breast and prostate carcinomas. Expression in tumors drives malignant growth and invasion by enhancing deposition of extracellular matrix proteins.

### References:

1. Christiansen HE, *et al.* (2010) Am. J. Hum. Genet. **86**:3892.
2. Tasab M, *et al.* (2000) EMBO J. **19**:22043.
3. Kwon YJ, *et al.* (2009) Oncol Res. **18**:1414.
4. Zhu J, *et al.* (2015) Cancer Res. **75**:15805.
5. Nese N, *et al.* (2010) Anal Quant Cytol Histol. **32**:90.