Human/Mouse HSP47 Antibody

Monoclonal Mouse IgG_{2A} Clone # 950806

Catalog Number: MAB9166

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse HSP47 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_{2A} Clone # 950806
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human HSP47 Ala19-Asp412 Accession # P50454
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 either lyophilized or as a 0.2 μm filtered solution in PBS.

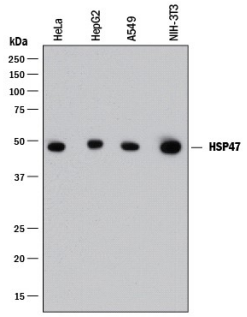
APPLICATIONS

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
Immunohistochemistry	5-25 µg/mL	See Below

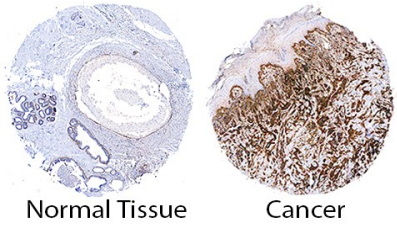
DATA

Western Blot



Detection of Human and Mouse HSP47 by Western Blot. 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.

Immunohistochemistry



HSP47 in Human Breast Cancer Tissue. 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 & 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.

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.** ● 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 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.

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