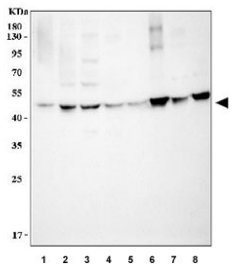
HSP47 Antibody / Collagen Chaperone Antibody (R31738)

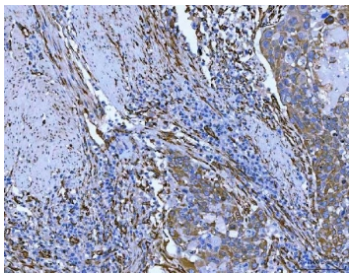
Catalog No.	Formulation	Size
R31738	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

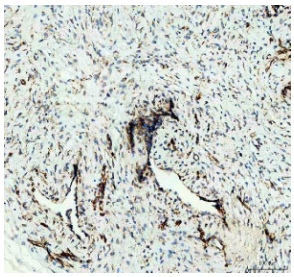
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P50454
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This HSP47 Antibody / Collagen Chaperone Antibody is available for research use only.



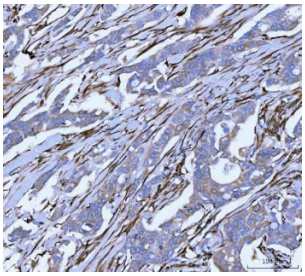
HSP47 Antibody Human, Mouse and Rat WB. Western blot analysis was performed using HSP47 Antibody on lysates from lane 1: human A431, lane 2: human SK-N-SH, lane 3: human HeLa, lane 4: rat lung, lane 5: rat kidney, lane 6: rat L6, lane 7: mouse lung, and lane 8: mouse NIH 3T3 cells. A prominent immunoreactive band is detected at approximately 46 kDa, consistent with the predicted molecular weight of HSP47 (SERPINH1). Comparable detection across human, rat, and mouse samples demonstrates broad species reactivity. This HSP47 Antibody, a Collagen Chaperone Antibody, is well suited for Western blot studies of collagen biosynthesis, endoplasmic reticulum function, extracellular matrix remodeling, and fibrosis research.



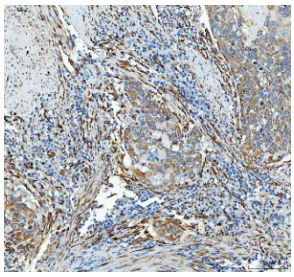
HSP47 Antibody Human Esophageal Squamous Carcinoma IHC. HSP47 Antibody was used for immunohistochemical staining of FFPE human esophageal squamous carcinoma tissue following heat-induced epitope retrieval in pH 8 EDTA buffer. The tissue was incubated with the primary antibody, followed by an HRP-conjugated secondary antibody and DAB chromogen for visualization. Strong cytoplasmic staining is observed in malignant squamous epithelial cells with additional labeling of stromal fibroblast-like cells, consistent with the endoplasmic reticulum localization and collagen chaperone function of SERPINH1. This HSP47 Antibody, a Collagen Chaperone Antibody, is well suited for studying collagen biosynthesis, extracellular matrix remodeling, fibrosis, and stromal responses in esophageal squamous carcinoma.



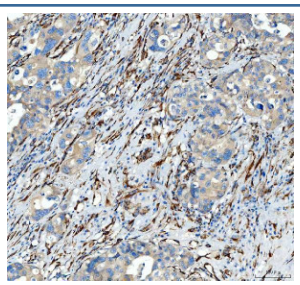
HSP47 Antibody Breast Cancer IHC. HSP47 Antibody was used for immunohistochemical staining of FFPE human breast cancer tissue following heat-induced epitope retrieval in pH 8 EDTA buffer. The section was incubated with the primary antibody at 2 ug/ml, followed by an HRP-conjugated goat anti-rabbit secondary antibody and DAB chromogen for visualization. Distinct cytoplasmic staining is observed within tumor-associated stromal cells and collagen-producing regions, consistent with the endoplasmic reticulum localization and collagen chaperone function of SERPINH1. This HSP47 Antibody, a Collagen Chaperone Antibody, is well suited for investigating extracellular matrix remodeling, collagen biosynthesis, fibrosis, and the stromal response associated with breast cancer.



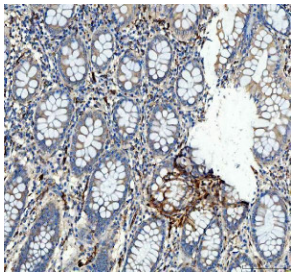
HSP47 Antibody Human Breast Cancer Tissue IHC. HSP47 Antibody was used for immunohistochemical staining of FFPE human breast cancer tissue following heat-induced epitope retrieval in pH 8 EDTA buffer. The tissue was incubated with the primary antibody, followed by an HRP-conjugated secondary antibody and DAB chromogen for visualization. Strong cytoplasmic staining is observed in malignant epithelial cells with additional labeling of stromal spindle-shaped cells, consistent with the endoplasmic reticulum localization and collagen chaperone function of SERPINH1. This HSP47 Antibody, a Collagen Chaperone Antibody, is well suited for investigating collagen biosynthesis, extracellular matrix remodeling, fibrosis, and the tumor microenvironment in breast cancer.



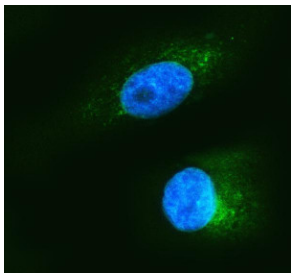
HSP47 Antibody Human Esophageal Squamous Carcinoma IHC. HSP47 Antibody was used for immunohistochemical staining of FFPE human esophageal squamous carcinoma tissue following heat-induced epitope retrieval in pH 8 EDTA buffer. The section was incubated with the primary antibody at 2 ug/ml, followed by an HRP-conjugated goat anti-rabbit secondary antibody and DAB chromogen for detection. Moderate to strong cytoplasmic staining is observed within malignant squamous epithelial cells and the surrounding stromal compartment, consistent with the expression pattern of the collagen-specific chaperone SERPINH1 during extracellular matrix remodeling. This HSP47 Antibody, a Collagen Chaperone Antibody, is useful for studying collagen biosynthesis, tumor-associated fibrosis, and stromal remodeling in esophageal cancer.



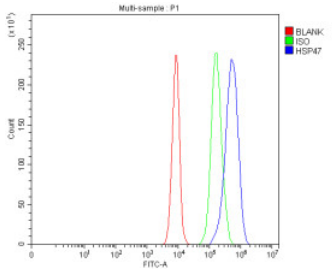
HSP47 Antibody Human Appendiceal Adenocarcinoma IHC. HSP47 Antibody was used for immunohistochemical staining of FFPE human appendiceal adenocarcinoma tissue following heat-induced epitope retrieval in pH 8 EDTA buffer. The section was incubated with the primary antibody at 2 ug/ml, followed by an HRP-conjugated goat anti-rabbit secondary antibody and DAB chromogen for detection. Prominent cytoplasmic staining is observed within stromal spindle-shaped cells and surrounding connective tissue, with weaker staining present in subsets of tumor cells, consistent with the role of SERPINH1 in collagen biosynthesis and extracellular matrix remodeling. This HSP47 Antibody, a Collagen Chaperone Antibody, is valuable for investigating fibrosis, collagen deposition, and stromal remodeling within the tumor microenvironment.



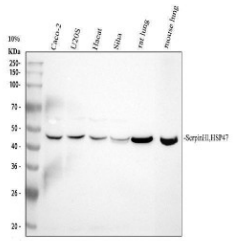
HSP47 Antibody Human Colon Cancer IHC. HSP47 Antibody was used for immunohistochemical staining of FFPE human colon cancer tissue following heat-induced epitope retrieval in pH 8 EDTA buffer. The section was incubated with the primary antibody at 2 ug/ml, followed by an HRP-conjugated goat anti-rabbit secondary antibody and DAB chromogen for detection. Predominant cytoplasmic staining is observed within stromal fibroblast-like cells surrounding the colonic glands, with comparatively weaker staining in the epithelial tumor cells, reflecting the collagen-associated expression pattern of SERPINH1 during extracellular matrix remodeling. This HSP47 Antibody, a Collagen Chaperone Antibody, is well suited for investigating collagen biosynthesis, tumor-associated fibrosis, and stromal remodeling in colorectal cancer.



HSP47 Antibody A549 Cell IF. HSP47 Antibody was used for immunofluorescent staining of A549 cells following enzyme-mediated antigen retrieval with AR0022 for 15 minutes. Cells were incubated with the primary antibody at 5 ug/ml, followed by an Alexa Fluor 488-conjugated goat anti-rabbit secondary antibody, while nuclei were counterstained with DAPI (blue). Bright green cytoplasmic fluorescence with a perinuclear distribution is observed, consistent with the localization of the collagen-specific chaperone SERPINH1 within the endoplasmic reticulum. This HSP47 Antibody, a Collagen Chaperone Antibody, is well suited for investigating collagen biosynthesis, endoplasmic reticulum function, extracellular matrix remodeling, and fibrosis-related cellular processes.



HSP47 Antibody A431 Cell FACS. HSP47 Antibody was evaluated by flow cytometry using fixed and permeabilized A431 cells. Cells were incubated with the primary antibody at 1 ug/1Ã—10^6 cells, followed by a Fluoro488-conjugated goat anti-rabbit secondary antibody. The blue histogram shows a clear rightward shift relative to the rabbit IgG isotype control (green) and the unstained blank control (red), demonstrating specific intracellular detection of HSP47. This HSP47 Antibody, a Collagen Chaperone Antibody, is suitable for flow cytometric analysis of SERPINH1 expression in permeabilized cells and supports studies of collagen biosynthesis, endoplasmic reticulum function, and extracellular matrix remodeling.



HSP47 Antibody Human and Rodent Lung WB. Western blot analysis was performed using HSP47 Antibody on lane 1: human Caco-2, lane 2: human U2OS, lane 3: human HaCaT, lane 4: human SiHa, lane 5: rat lung, and lane 6: mouse lung lysates. A distinct band is detected at approximately 46 kDa in each sample, matching the predicted molecular weight of HSP47 (SERPINH1). The strong signal observed in both rat and mouse lung tissues is consistent with the abundant collagen synthesis occurring within pulmonary tissue. This HSP47 Antibody, a Collagen Chaperone Antibody, is well suited for Western blot studies of collagen biosynthesis, endoplasmic reticulum function, extracellular matrix remodeling, and fibrosis research.

Description

HSP47 Antibody / Collagen Chaperone Antibody recognizes HSP47, also known as SERPINH1, a collagen-specific molecular chaperone that resides primarily within the endoplasmic reticulum. Unlike many members of the heat shock protein family that assist with the folding of diverse client proteins, HSP47 displays remarkable substrate specificity by binding newly synthesized procollagen molecules during their maturation. This interaction promotes correct collagen folding, stabilizes the characteristic triple-helical structure, and helps prevent aggregation before secretion into the extracellular matrix. Because collagen is the most abundant structural protein in the human body, HSP47 is essential for normal connective tissue development, tissue integrity, wound healing, and organ function. An HSP47 Antibody is therefore widely used to investigate collagen biosynthesis, extracellular matrix organization, and diseases characterized

by abnormal collagen production.

HSP47 expression is closely linked to tissues with active collagen synthesis, including fibroblasts, osteoblasts, chondrocytes, hepatic stellate cells, vascular smooth muscle cells, and many epithelial cell populations undergoing remodeling or repair. During collagen maturation, HSP47 binds procollagen within the endoplasmic reticulum and releases its cargo as environmental conditions change during transport toward the Golgi apparatus. Loss or dysfunction of HSP47 disrupts collagen assembly, resulting in defective extracellular matrix formation and impaired tissue architecture. Researchers studying connective tissue biology frequently examine HSP47 alongside collagen types I, II, III, and IV, as well as additional extracellular matrix proteins involved in tissue remodeling. Because of its highly specialized biological role, the protein has become an important marker for studies focused on collagen homeostasis rather than general cellular stress responses.

Numerous studies have demonstrated that elevated HSP47 expression accompanies pathological fibrosis affecting the lung, liver, kidney, heart, and other organs. Increased collagen deposition is a defining feature of many chronic fibrotic disorders, making HSP47 an attractive biomarker for understanding disease progression and evaluating potential anti-fibrotic therapies. Altered expression has also been reported in multiple cancers, where remodeling of the extracellular matrix contributes to tumor growth, invasion, angiogenesis, and metastatic spread. Investigators continue to explore how HSP47 influences tumor-associated fibroblasts, stromal interactions, epithelial-to-mesenchymal transition, and the formation of collagen-rich tumor microenvironments. An HSP47 Antibody is therefore valuable for both basic research and translational studies investigating fibrosis, cancer biology, tissue regeneration, and extracellular matrix remodeling.

HSP47 is commonly analyzed using Western blot, immunohistochemistry, immunofluorescence, immunocytochemistry, immunoprecipitation, and flow cytometry to evaluate protein expression, intracellular localization, and changes associated with disease or experimental treatment. Its predominately endoplasmic reticulum localization and tight relationship with collagen synthesis make it an informative marker for studies examining secretory pathway function and matrix production. When combined with complementary collagen, fibrosis, or extracellular matrix biomarkers, HSP47 provides additional insight into tissue remodeling and cellular differentiation. NSJ Bioreagents offers carefully validated antibodies to support these applications across diverse research models. An HSP47 Antibody / Collagen Chaperone Antibody provides researchers with a reliable tool for investigating collagen maturation, extracellular matrix biology, and the molecular mechanisms underlying fibrosis, connective tissue disorders, and cancer progression.

Browse our Cell Biology Antibodies page to find validated antibodies for HSP47 and other proteins involved in protein folding, collagen biosynthesis, endoplasmic reticulum function, and cellular homeostasis.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the HSP47 Antibody / Collagen Chaperone Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 247-418) was used as the immunogen for this HSP47 antibody.

Storage

After reconstitution, the HSP47 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

HSP47 antibody, SERPINH1 antibody, Serpin Family H Member 1 antibody, Heat Shock Protein 47 antibody, Collagen Chaperone antibody

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