

## HSP47/SERPINH1 Polyclonal antibody

Catalog Number: 10875-1-AP

Featured Product

14 Publications

## Basic Information

## Catalog Number:

10875-1-AP

## Size:

150ul, Concentration: 500 ug/ml by Nanodrop;

## Source:

Rabbit

## Isotype:

IgG

## Immunogen Catalog Number:

AG1301

## GenBank Accession Number:

BC014623

## GeneID (NCBI):

871

## UNIPROT ID:

P50454

## Full Name:

serpin peptidase inhibitor, clade H (heat shock protein 47), member 1, (collagen binding protein 1)

## Calculated MW:

46 kDa

## Observed MW:

46 kDa

## Purification Method:

Antigen affinity purification

## Recommended Dilutions:

WB 1:1000-1:6000

IHC 1:250-1:1000

IF/ICC 1:200-1:800

## Applications

## Tested Applications:

WB, IHC, IF/ICC, FC (Intra), ELISA

## Cited Applications:

WB, IHC, IF, IP

## Species Specificity:

human, mouse, rat

## Cited Species:

human, mouse

## Positive Controls:

WB: HT-1080 cells, A2780 cells, A431 cells, HeLa cells, NIH/3T3 cells, BALB/3T3 clone A31 cells

IHC: human stomach cancer tissue, human colon tissue, human hepatocirrhosis tissue, human lung cancer tissue, mouse kidney tissue, mouse lung tissue, rat kidney tissue, rat lung tissue

IF/ICC: HeLa cells,

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Background Information

HSP47 is also named as Serpin H1, colligen, CBP1, CBP2, HSP47, SERPINH2 and belongs to the serpin family. This gene encodes a member of the serpin superfamily of serine proteinase inhibitors. The encoded protein is localized to the endoplasmic reticulum. It binds specifically to collagen and can be involved as a chaperone in the biosynthetic pathway of collagen. The Serpin Family H Member 1 (SERPINH1) gene encodes a protein called HSP47, which is required for the correct folding and secretion of collagen (PMID: 30128672). SERPINH1 has been implicated in several collagen-related diseases, such as, brittle bone disease, keloid scars, and lung fibrosis (PMID: 32091407). SERPINH1 also correlates with the grade of glioma, and regulates proliferation, migration and invasion of glioma cell lines (PMID: 24595468). SERPINH1 regulates the Wnt/ $\beta$ -catenin signaling pathway and modulates gastric cancer (GC) progression (PMID: 32091407). SERPINH1 is aberrantly expressed in cervical cancer, breast cancer, glioblastoma and colorectal cancer (PMID: 32091407). SERPINH1 promotes invasion and metastasis of breast cancer cells by regulating the expression of several extracellular matrix (ECM) proteins (PMID: 25744716). Autoantibodies to the encoded protein have been found in patients with rheumatoid arthritis. HSP47 has a calculated molecular weight of 46 kDa.

## Notable Publications

Author	Pubmed ID	Journal	Application
Veronique Pomerleau	36272709	J Proteomics	IF
Huan Chen	36422552	Pharmaceuticals (Basel)	IHC
Xiaoqing Liu	34726485	mSystems	IP

## Storage

## Storage:

Store at -20°C. Stable for one year after shipment.

## Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

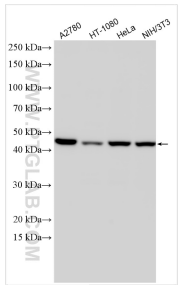
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

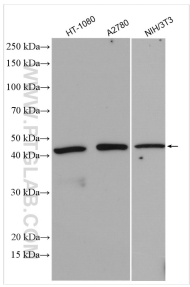
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

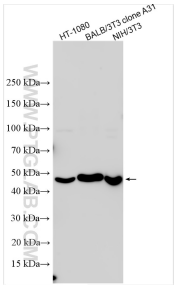
Selected Validation Data



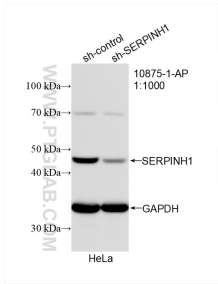
Various lysates were subjected to SDS PAGE followed by western blot with 10875-1-AP (HSP47 antibody) at dilution of 1:2500 incubated at room temperature for 1.5 hours.



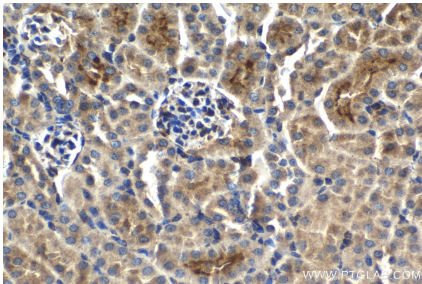
Various lysates were subjected to SDS PAGE followed by western blot with 10875-1-AP (HSP47 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



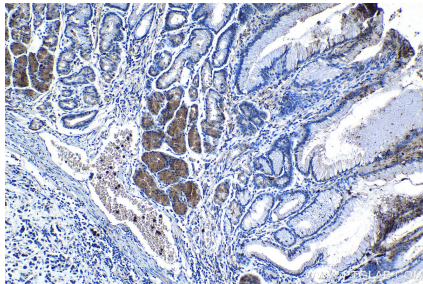
Various lysates were subjected to SDS PAGE followed by western blot with 10875-1-AP (HSP47/SERPINH1 antibody) at dilution of 1:4000 incubated at room temperature for 1.5 hours.



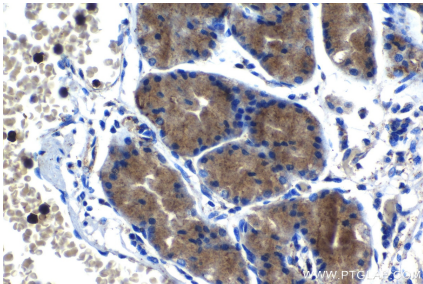
WB result of HSP47 antibody (10875-1-AP; 1:1000; incubated at room temperature for 1.5 hours) with sh-Control and sh-HSP47 transfected HeLa cells.



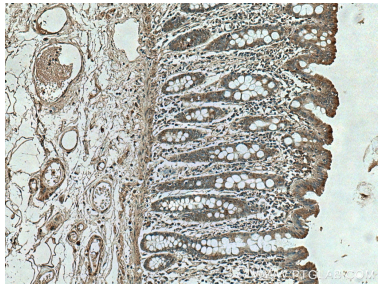
Immunohistochemical analysis of paraffin-embedded mouse kidney tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



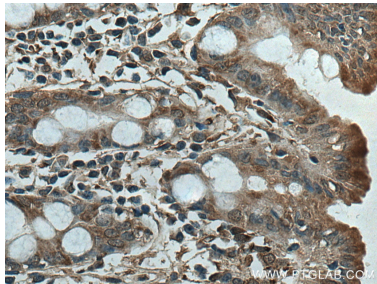
Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



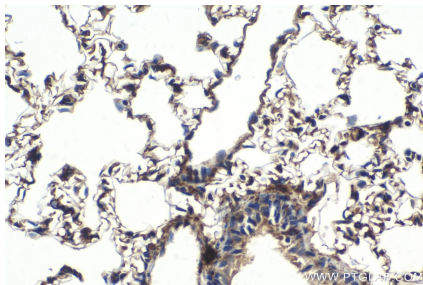
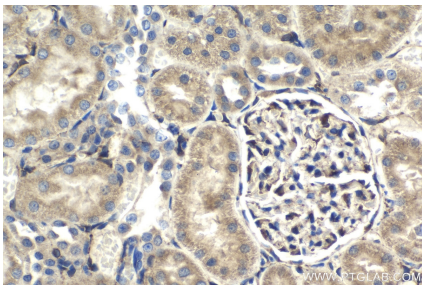
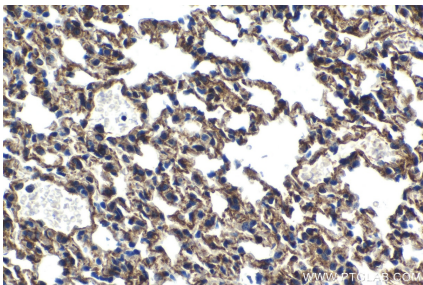
Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



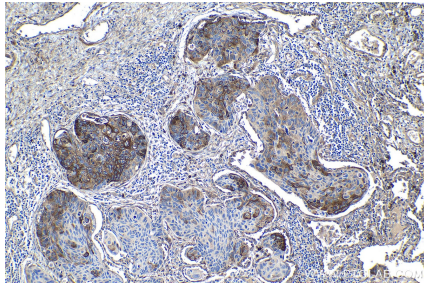
Immunohistochemical analysis of paraffin-embedded human colon tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



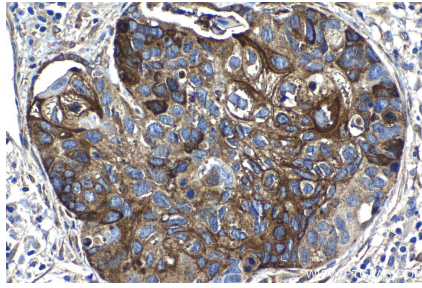
Immunohistochemical analysis of paraffin-embedded human colon tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



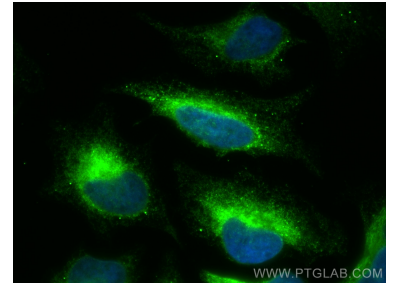
Immunohistochemical analysis of paraffin-embedded mouse lung tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded rat kidney tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



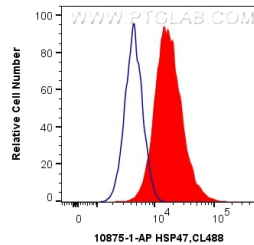
Immunohistochemical analysis of paraffin-embedded rat lung tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 10875-1-AP (HSP47 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

Immunofluorescent analysis of (4% PFA) fixed HeLa cells using HSP47 antibody (10875-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



1X10<sup>6</sup> HepG2 cells were intracellularly stained with 0.4 ug Anti-Human HSP47 (10875-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Isotype Control. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).