

## HSP70 Monoclonal antibody

Catalog Number: 66183-1-Ig **31 Publications**

## Basic Information

<b>Catalog Number:</b> 66183-1-Ig	<b>GenBank Accession Number:</b> BC009322	<b>Purification Method:</b> Protein A purification
<b>Concentration:</b> 1000 ug/ml	<b>GeneID (NCBI):</b> 3303	<b>CloneNo.:</b> 4E7E5
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> PODMV8	<b>Recommended Dilutions:</b> WB 1:20000-1:100000 IHC 1:50-1:500 IF/ICC 1:400-1:1600
<b>Isotype:</b> IgG1	<b>Full Name:</b> heat shock 70kDa protein 1A	
<b>Immunogen Catalog Number:</b> AG19111	<b>Calculated MW:</b> 70 kDa	
	<b>Observed MW:</b> 65-70 kDa	

## Applications

<b>Tested Applications:</b> WB, IHC, IF/ICC, FC (Intra), ELISA	<b>Positive Controls:</b> <b>WB</b> : LNCaP cells, HEK-293 cells, HeLa cells, Recombinant protein, whole yeast, HEK-293T cells, K-562 cells <b>IHC</b> : human breast cancer tissue, human pancreas cancer tissue <b>IF/ICC</b> : HeLa cells,
<b>Cited Applications:</b> WB, IHC, IF, CoIP, ELISA	
<b>Species Specificity:</b> human, mouse, rat, yeast	
<b>Cited Species:</b> human, mouse, rat	
<b>Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0</b>	

## Background Information

HSPA1A, collectively known as HSP70 (also referred to HSP72), is a stress-inducible member of heat-shock protein 70 (HSP70) proteins which are highly conserved chaperons implicated in protein folding, protein refolding, protein transport, and protein targeting. Encoded by two closely linked, intronless and stress-inducible genes, HSPA1A and HSPA1B differ by only two amino acids and are believed to be fully interchangeable proteins. HSPA1A is a cytosol nuclear protein able to translocate between cytoplasm and nucleus. Generally, HSPA1A is thought to be expressed in unstressed normal cells at low or undetectable levels. Expression of HSPA1A protein can be highly activated by various stressful stimuli. Significant up-regulation of HSPA1A has been found in various tumors. Recently it has been reported that HSPA1A can be constitutively expressed in selected cell types. HSP70 is also used as exosomal marker. This antibody well recognized the endogenous HSP70 protein in multiple cell lines. (21373891)

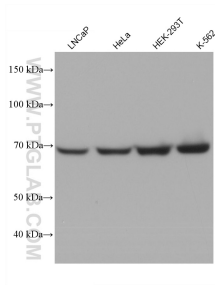
## Notable Publications

Author	Pubmed ID	Journal	Application
Xuan Wang	36167857	Nat Commun	WB
Yunfei Chen	32966240	Aging (Albany NY)	WB
Liping Li	31492158	BMC Cancer	WB

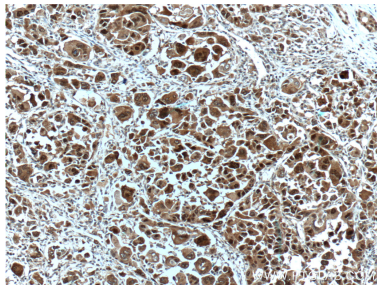
## Storage

**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

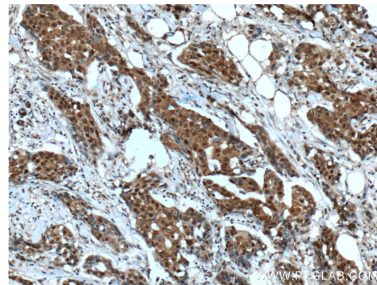
Selected Validation Data



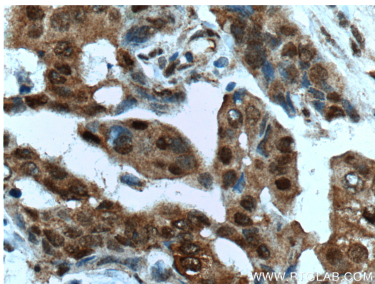
Various lysates were subjected to SDS PAGE followed by western blot with 66183-1-Ig (HSP70 antibody) at dilution of 1:50000 incubated at room temperature for 1.5 hours.



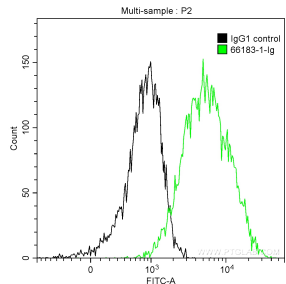
Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 66183-1-Ig (HSP70 Antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



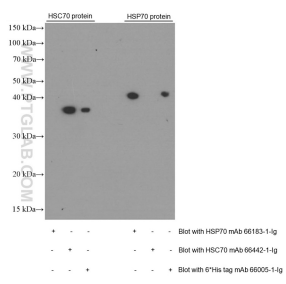
Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 66183-1-Ig (HSP70 Antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



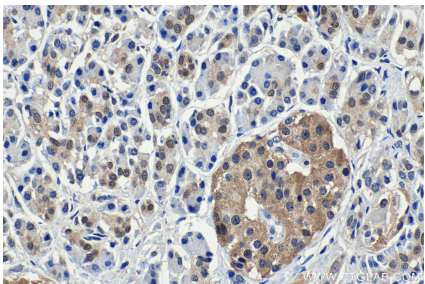
Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 66183-1-Ig (HSP70 Antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



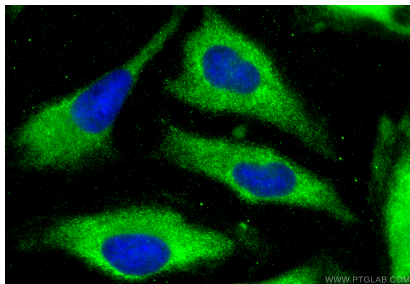
1X10<sup>6</sup> HeLa cells were intracellularly stained with 0.2 ug Anti-Human HSP70 (66183-1-Ig, Clone:4E7E5) and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000 (green), and 0.2 ug Mouse IgG1 Isotype Control (66360-1-Ig, Clone: T1F8D3F10) (black). Cells were fixed with 4% PFA and permeabilized with 0.1% TritonX-100.



6<sup>35</sup>S tagged-recombinant HSP70 (291-641 aa) and HSC70 (346-646 aa) proteins were subjected to SDS PAGE followed by western blot with 66183-1-Ig (HSP70 antibody), 66442-1-Ig (HSC70 antibody), and 66005-1-Ig (His antibody), respectively, at dilution of 1:50000, incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human pancreas cancer tissue slide using 66183-1-Ig (HSP70 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Ethanol) fixed HeLa cells using HSP70 antibody (66183-1-Ig, Clone: 4E7E5) at dilution of 1:800 and CoraLite®488-Conjugated Goat Anti-Mouse IgG(H+L) (SA00013-1).