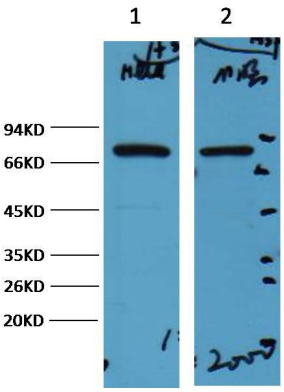
ELK Biotechnology

HSP70 Mouse mAb
Catalog NO.: EM1042
For research use only.

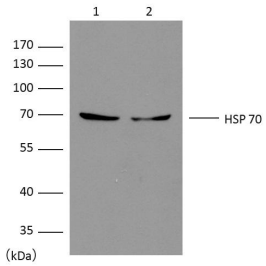
Overview

Product name	HSP70 Mouse Monoclonal antibody
Source	Mouse
Applications	**WB IHC IF**
Species reactivity	**Human Rat Mouse**
Recommended dilutions	**WesternBlot:1/1000-2000** **Immunofluorescence:1/100-200** **Immunohistochemistry:1/200-500** **NOTE: Optimal dilutions should be determined by the end user.**
Immunogen	Synthetic Peptide
Species	Human
Storage	PBS with 0.02% sodium azide and 50% glycerol pH 7.4. Store at -20° C. Avoid repeated freeze-thaw cycles.
Isotype	IgG1
Clonality	Monoclonal
Concentration	1 mg/ml
Observed band	**70kDa**
GeneID（Human）	3303
Human Swiss-Prot No.	P0DMV8
Cellular localization	Cytoplasm
Alternative Names	Heat shock 70 kDa protein/2 heat shock 70kDa proteinA HSP70 HSP70 HSP70/HSP70 2 HSP70A HSP70.1/HSP70.2 HSP70I HSP72 HSPA1 HSPA1A HSPA1B
Background	The 70 kilodalton heat shock proteins (Hsp70s) are a family of ubiquitously expressed heat shock proteins. Proteins with similar structure exist in virtually all living organisms. The Hsp70s are an important part of the cell's machinery for protein folding and help to protect cells from stress. Hsp70 is

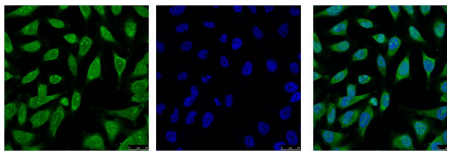
usually in an ATP bound state. Hsp70 by itself is characterized by a very weak ATPase activity such that spontaneous hydrolysis will not occur for many minutes. As newly synthesized proteins emerge from the ribosomes the substrate binding domain of Hsp70 recognizes sequences of hydrophobic amino acid residues and interacts with them. This spontaneous interaction is reversible and in the ATP bound state Hsp70 may relatively freely bind and release peptides. However the presence of a peptide in the binding domain stimulates the ATPase activity of Hsp70 increasing its normally slow rate of ATP hydrolysis.



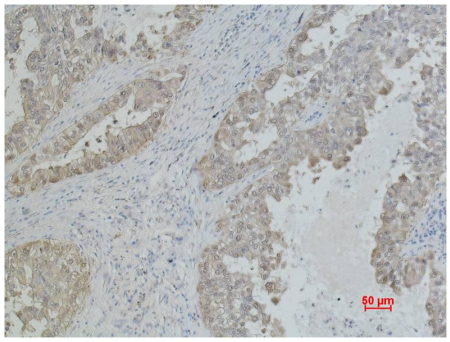
Western blot analysis of) Hela 2) Mouse Brain with HSP70 mAb diluted at:2000.



Western blot analysis of extracts from HeLa (Lane)MCF-7 (Lane 2) using HSP70 diluted at 1:2000.



IF analysis of Hela with EM1042(Left) and DAPI (Right) diluted at:100.



Immunohistochemical analysis of paraffin-embedded Human Lung caricnoma using HSP70 （EM1042）Mouse mAb diluted at:500.