

HSP70 Mouse Monoclonal Antibody (3G10)

Catalog No: RA10235

Basic Information

Host species	Mouse
Applications	WB, IF, IHC
Species Cross-Reactivity	H, M, R, Pg
Specificity	HSP70 Mouse monoclonal antibody detects endogenous HSP70 proteins.
Recommended dilutions	WB: 1:1,000-2,000 IF: 1:100-200 IHC: 1:200-500 Optimal dilutions should be determined by the end user.

Applications

Formulation	PBS, pH 7.4, containing 0.02% sodium azide as Preservative and 50% Glycerol.
Storage	Store at -20°C. Avoid repeated freeze-thaw cycles.
Concentration	1 mg/ml
Clonality	Monoclonal

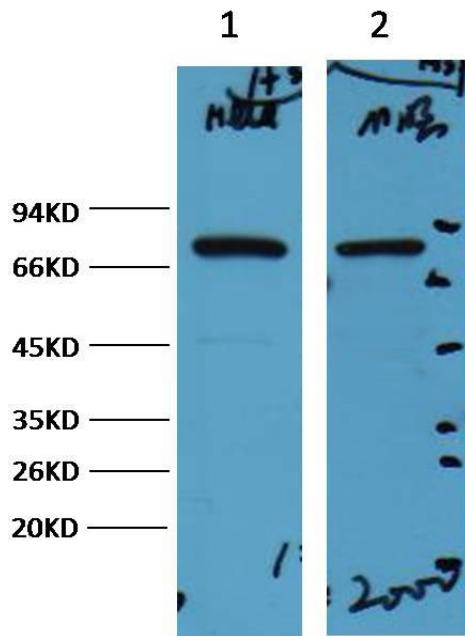
Background

Alternative Names	
Observed band	70
Human Gene ID	3303
Human Swiss-Prot Number	P08107

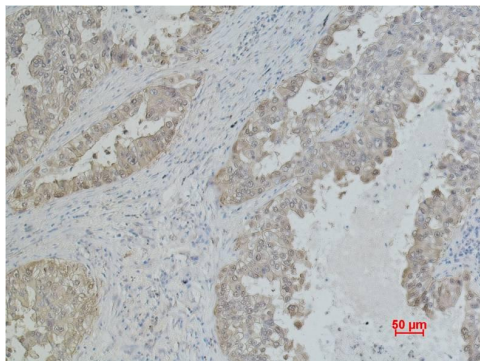
Background

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.

Selected Validation Data



Western blot analysis of Pig Skeletal Muscle with HSP70 mAb diluted at 1:2,000.



Immunohistochemical analysis of paraffin-embedded Human Lung carcinoma using HSP70 Mouse mAb diluted at 1:500.