

## Monoclonal Antibody to Heat shock protein 70 / HSP70 - Ascites

<b>Alternate names:</b>	HSP70-1/HSP70-2, HSP70.1, HSPA1, HSPA1A, HSPA1B, Heat shock 70 kDa protein 1A/1B
<b>Catalog No.:</b>	SM5084
<b>Quantity:</b>	0.1 ml
<b>Background:</b>	<p>The HSP70 family is a set of highly conserved proteins that are induced by a variety of biological stresses, including heat stress, in every organism in which the proteins have been examined. The human HSP70 family members include: HSP70, a 70 kDa protein which is strongly inducible in all organisms but which is also constitutively expressed in primate cells; HSP72, a 72 kDa protein which is induced exclusively under stress conditions; HSC70, or cognate protein, is a 72 kDa constitutively expressed protein which is involved in uncoating clathrin-coated vesicles; GRP78, or BiP, is a glucose- regulated 78 kDa protein localized to the endoplasmic reticulum; and mitochondrial HSP70 (mtHSP70, GRP75 or mortalin) a 75 kDa protein that is found within the mitochondria. mtHSP70 is a mitochondrial resident protein that is involved in protein translocation into the mitochondria. Preproteins cross the mitochondrial membranes in an extended conformation. This requires unfolding of preproteins before entering translocation pores in the mitochondrial outer membrane. Preprotein unfolding is thought to be mediated by mtHSP70 and other inner membrane proteins of the mitochondria.</p>
<b>Uniprot ID:</b>	<a href="#">P08107</a>
<b>NCBI:</b>	<a href="#">NP_005336</a>
<b>GeneID:</b>	<a href="#">3303</a>
<b>Host / Isotype:</b>	Mouse / IgG3
<b>Clone:</b>	JG1
<b>Immunogen:</b>	Synthetic Peptide corresponding to amino acid residues 615-633 from mouse mtHSP70 <b>AA Sequence:</b> G(615) S G S S G T G E Q K E D Q K E E K Q(633)
<b>Format:</b>	<b>State:</b> Liquid diluted ascites. <b>Buffer System:</b> PBS containing 0.05% Sodium Azide as preservative.
<b>Applications:</b>	Immunocytochemistry: 1/50, results in a worm-like staining pattern of mtHSP70 in DAP.3 cells, consistent with mitochondrial localization. Immunoprecipitation. Western blot: 1/500, detects a single ~75 kDa band representing mtHSP70 from U2OS cell homogenate. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

- Specificity:** SM5084 detects mitochondrial heat shock protein 70 kDa (mtHSP70).  
**Species:** Human, Primates, Mouse, and Canine.  
Other species not tested.
- Storage:** Aliquot and store the antibody at -20°C .  
Avoid repeated freezing and thawing.  
Shelf life: One year from despatch.
- General Readings:** 1. Hybridoma, 14(4): 347-354, 1995.  
2. J. Cell Bio., 150(6): 1489-1497, 2000.  
3. Mol. Cel. Bio., 23(3): 1085-1094, 2003.