

## Purified anti-Hsp70 Antibody

<b>Catalog# / Size</b>	648001 / 25 µg 648002 / 100 µg
<b>Clone</b>	W27
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Heat shock protein 70
<b>Isotype</b>	Mouse IgG2a, λ
<b>Description</b>	Hsp70 is a member of the Hsp family of highly conserved proteins that play a role in a number of important functions. Their synthesis is increased upon environmental stress. They function by acting as molecular chaperones, facilitating protein refolding and preventing protein aggregation. It has been reported that extracellular Hsp70 also exhibits immunomodulatory effects on innate and acquired immunity.

### Product Details

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<b>Reactivity</b>	Human, Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Hsp70 protein from HeLa cells.
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C.
<b>Application</b>	<a href="#">WB, ICFC - Quality tested</a> <a href="#">ICC - Verified</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">Western blotting</a> . For Western blotting, the suggested use of this reagent is 0.25 - 1.0 µg per ml. For immunocytochemistry, the suggested use of this reagent is 1.0 - 5.0 µg per ml. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Product Citations</b>	<ol style="list-style-type: none"><li>1. Fong J, <i>et al.</i> 2015. EMBO J. 34: 2775 - 2788. <a href="#">PubMed</a></li><li>2. Zhang K, <i>et al.</i> 2021. Neuron. 109(12):1949-1962.e6. <a href="#">PubMed</a></li><li>3. Våtsveen TK, <i>et al.</i> 2018. J Hematol Oncol. 11:23. <a href="#">PubMed</a></li><li>4. Harris IS <i>et al.</i> 2019. Cell metabolism. 29(5):1166-1181. <a href="#">PubMed</a></li></ol>
<b>RRID</b>	AB_2028531 (BioLegend Cat. No. 648001) AB_2264228 (BioLegend Cat. No. 648002)

### Antigen Details

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<b>Structure</b>	Hsp proteins are the most conserved proteins present in both prokaryotes and eukaryotes. Human HSp70 contains multiple isoforms. Hsp70s consist of three structural domains, a 44Kd amino-terminal ATPase domain (NBD), followed by an 18 Kd substrate
<b>Distribution</b>	Ubiquitous, cytoplasmic and nuclear
<b>Function</b>	Molecular chaperones assisting in the folding of proteins and preventing protein aggregation
<b>Biology Area</b>	Cell Biology, Neurodegeneration, Neuroinflammation, Neuroscience, Protein Trafficking and Clearance

## Antigen References

1. Sharma D, et al. 2009. *Protein Peptide Lett.* 16:571.
2. Johnson JD, et al. 2006. *J. Leuk. Biol.* 79:425.
3. Bukau B, et al. 1998. *Cell* 92:351.

## Gene ID

[3308](#)

## Related Protocols

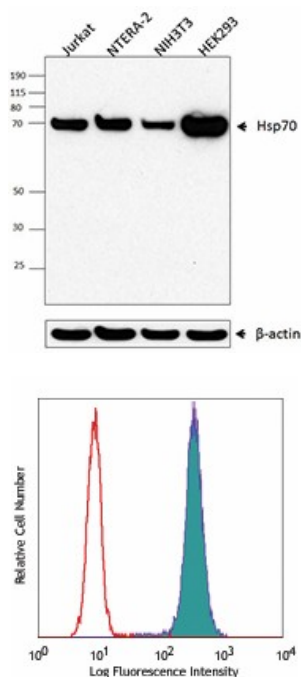
[Immunocytochemistry Staining Protocol](#)

[Western Blotting Protocol](#)

## Other Formats

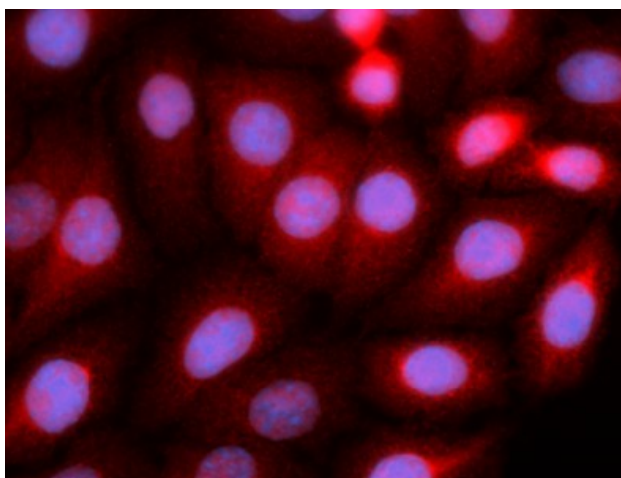
Purified anti-Hsp70, Alexa Fluor® 488 anti-Hsp70, Direct-Blot™ HRP anti-Hsp70

## Product Data



Total cell lysates (15 µg protein) from Jurkat, NTERA-2, NIH3T3 and HEK293 were resolved by 4-12% Bis-tris gel electrophoresis, transferred to nitrocellulose, and probed with anti-Hsp70 antibody (clone W27). Proteins were visualized using a goat anti-mouse IgG secondary antibody conjugated to HRP and chemiluminescence detection. Purified anti-β-actin Antibody was used as a loading control.

Human cervical cancer cell line, HeLa, intracellularly stained with purified W27 conjugated with PE.



HeLa cells were fixed with 2% paraformaldehyde (PFA) for ten minutes, permeabilized with 0.5% Triton X-100 for five minutes, and blocked with 5% FBS for 30 minutes. Then the cells were intracellularly stained with 2 µg/mL anti-Hsp70 Antibody (clone W27) followed by Alexa Fluor® 594 (red) conjugated goat anti-mouse IgG (Cat # 405326) in blocking buffer for two hours at room temperature. Nuclei were counterstained with DAPI (blue). The image was captured with a 60X objective.

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