

Anti-HSP70 Hspa1b Antibody (Monoclonal, BRM-22)

Catalog Number: MA1050

About Hspa1b

Heat-shock proteins, or stress proteins, are expressed in response to heat shock and a variety of other stress stimuli including oxidative free radicals and toxic metal ions. Sargent et al. identified a duplicated HSP70 locus in the class III region of the major histocompatibility complex on 6p21.3. A duplicated locus encoding the major heat shock-induced protein HSP70 is located in the major histocompatibility complex (MHC) class III region 92 kilobases (kb) telomeric to the C2 gene. The 70-kd mammalian heat shock proteins are structurally and functionally related to the uncoating protein that releases clathrin triskelia from coated vesicles.

Overview

Product Name	Anti-HSP70 Hspa1b Antibody (Monoclonal, BRM-22)
Reactive Species	Bovine, Human, Mouse, Rabbit, Rat
Description	Boster Bio Anti-HSP70 Hspa1b Antibody (Monoclonal, BRM-22) catalog # MA1050. Tested in IHC, WB applications. This antibody reacts with Bovine, Human, Mouse, Rabbit, Rat.
Application	IHC, WB
Clonality	Monoclonal BRM-22
Formulation	Mouse ascites fluid, 1.2% sodium acetate, 2mg BSA, with 0.01mg NaN ₃ as preservative.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P17879

Technical Details

Immunogen	HSP70 isolated from bovine brain.
Predicted Reactive Species	Monkey
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and IHC(F).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Mouse IgG1
Form	Lyophilized
Concentration	Adding 1 ml of PBS buffer will yield a concentration of 100 ug/ml.

Purification	Ascites
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, bovine, rabbit, rat, By Heat</p> <p>Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human, bovine, rabbit, rat, -</p> <p>Western blot, 1ug/ml, Human, bovine, mouse, rabbit, rat</p>

Anti-HSP70 Hspa1b Antibody (Monoclonal, BRM-22) (MA1050) Images

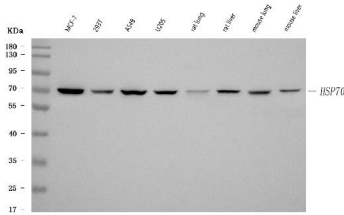


Figure 1. Western blot analysis of HSP70 using anti-HSP70 antibody (MA1050).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human MCF-7 whole cell lysates,
Lane 2: human 293T whole cell lysates,
Lane 3: human A549 whole cell lysates,
Lane 4: human U2OS whole cell lysates,
Lane 5: rat lung tissue lysates,
Lane 6: rat liver tissue lysates,
Lane 7: mouse lung tissue lysates,
Lane 8: mouse liver tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-HSP70 antigen affinity purified monoclonal antibody (Catalog # MA1050) at 1 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for HSP70 at approximately 70 kDa. The expected band size for HSP70 is at 70 kDa.

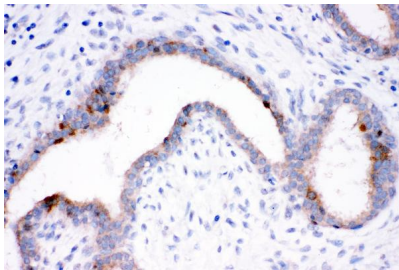


Figure 2. IHC analysis of HSP70 using anti-HSP70 antibody (MA1050).

HSP70 was detected in paraffin-embedded section of human breast cancer tissues. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-HSP70 Antibody (MA1050) overnight at 4°C. Peroxidase Conjugated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

9 Publications Citing This Product

1. PubMed ID: 10.1007/s00484-016-1281-1, Expression dynamics of HSP70 during chronic heat stress in Tharparkar cattle
2. PubMed ID: -, Wang,D.,Ripley-Gonzalez,J.W.& Hu,Y.Aerobic Physical Training Protects the Rat Brain Against Exercise-Heat Related Oxidative Damage through the Increased Expression of HSP70.Neurophysiology 51,66–71(2019).<https://doi.org/10.1007/s11062-019-09794-9>
3. PubMed ID: 17465496, Yi Sx, Peng Y, Chang Xr, Peng N, Yan J, Lin Yp. World J Gastroenterol. 2007 Apr 21;13(15):2174-8. Effect Of Pre-Moxibustion On Apoptosis And Proliferation Of Gastric Mucosa Cells.

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