

Anti-HSPB8/Hsp22 Antibody Picoband™ (monoclonal, 7D8)

Catalog # ABO14941

Product Information

Application	WB, IF, ICC, FC
Primary Accession	Q9UJY1
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Rat, Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-HSPB8/Hsp22 Antibody Picoband™ (monoclonal, 7D8) . Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	26353
Other Names	Heat shock protein beta-8, HspB8, Alpha-crystallin C chain, E2-induced gene 1 protein, Heat shock protein family B member 8, Protein kinase H11, Small stress protein-like protein HSP22, HSPB8, CRYAC, E2IG1, HSP22
Calculated MW	21604
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Rat Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human Flow Cytometry, 1-3 µg/1x10 ⁶ cells, Human
Subcellular Localization	Nucleus. Cytoplasm.
Tissue Specificity	Predominantly expressed in skeletal muscle and heart.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Clone Names Immunogen	Clone: 7D8 E.coli-derived human HSPB8/Hsp22 recombinant protein (Position: M1-T196). Human HSPB8/Hsp22 shares 94.4% and 95.4% amino acid (aa) sequence identity with mouse and rat HSPB8/Hsp22, respectively.
Purification	Immunogen affinity purified.

Cross Reactivity

No cross-reactivity with other proteins.

Storage

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.

Protein Information**Name**

HSPB8

Synonyms

CRYAC, E2IG1, HSP22

Function

Involved in the chaperone-assisted selective autophagy (CASA), a crucial process for protein quality control, particularly in mechanical strained cells and tissues such as muscle. Displays temperature-dependent chaperone activity.

Cellular Location

Cytoplasm. Nucleus Note=Translocates to nuclear foci during heat shock

Tissue Location

Predominantly expressed in skeletal muscle and heart.

Background

Heat shock protein beta-8 is a protein that in humans is encoded by the HSPB8 gene. The protein encoded by this gene belongs to the superfamily of small heat-shock proteins containing a conservative alpha-crystallin domain at the C-terminal part of the molecule. The expression of this gene is induced by estrogen in estrogen receptor-positive breast cancer cells, and this protein also functions as a chaperone in association with Bag3, a stimulator of macroautophagy. Thus, this gene appears to be involved in regulation of cell proliferation, apoptosis, and carcinogenesis, and mutations in this gene have been associated with different neuromuscular diseases, including Charcot-Marie-Tooth disease.

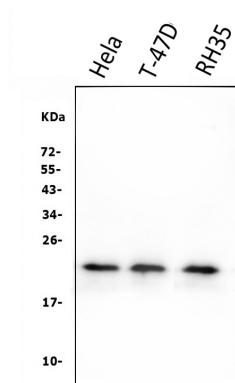
Images

Figure 1. Western blot analysis of HSPB8/Hsp22 using anti-HSPB8/Hsp22 antibody (M02492-2).

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 50ug of sample under reducing conditions.

Lane 1: human HeLa whole cell lysates;

Lane 2: human T-47D whole cell lysates;

Lane 3: rat RH35 whole cell lysates.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-HSPB8/Hsp22 antigen affinity purified monoclonal antibody (Catalog # M02492-2) at 0.5 µg/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

HSPB8/Hsp22 at approximately 22KD. The expected band

size for HSPB8/Hsp22 is at 22KD.

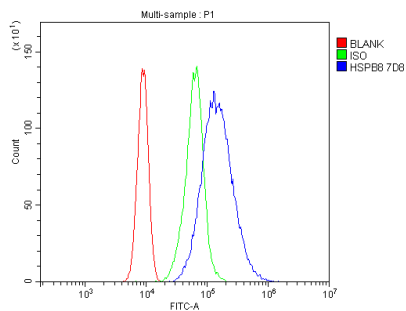


Figure 2. Flow Cytometry analysis of CACO-2 cells using anti-HSPB8/Hsp22 antibody (M02492-2). Overlay histogram showing CACO-2 cells stained with M02492-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-HSPB8/Hsp22 Antibody (M02492-2, 1 $\mu\text{g}/1 \times 10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 $\mu\text{g}/1 \times 10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 $\mu\text{g}/1 \times 10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

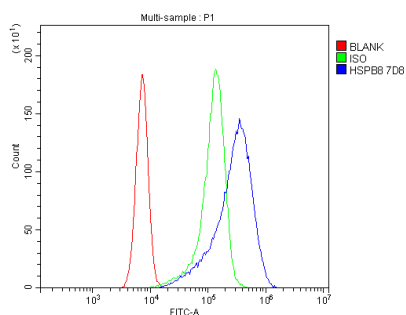


Figure 3. Flow Cytometry analysis of U2OS cells using anti-HSPB8/Hsp22 antibody (M02492-2). Overlay histogram showing U2OS cells stained with M02492-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-HSPB8/Hsp22 Antibody (M02492-2, 1 $\mu\text{g}/1 \times 10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 $\mu\text{g}/1 \times 10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 $\mu\text{g}/1 \times 10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

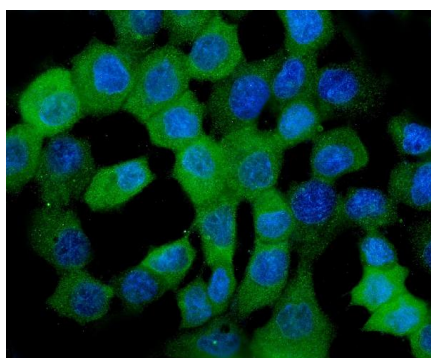


Figure 4. IF analysis of HSPB8/Hsp22 using anti-HSPB8/Hsp22 antibody (M02492-2). HSPB8/Hsp22 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 $\mu\text{g}/\text{mL}$ mouse anti-HSPB8/Hsp22 Antibody (M02492-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.