

# Product Datasheet

## HSP70/HSPA1A Antibody - BSA Free NBP1-77456

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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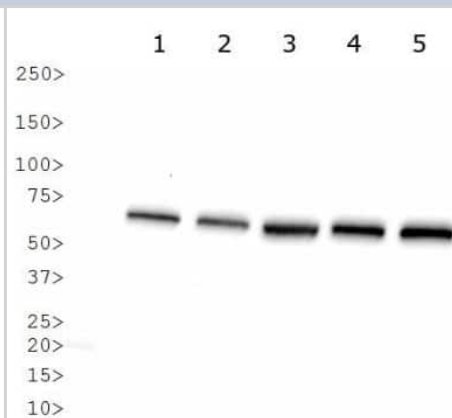
**NBP1-77456**

HSP70/HSPA1A Antibody - BSA Free

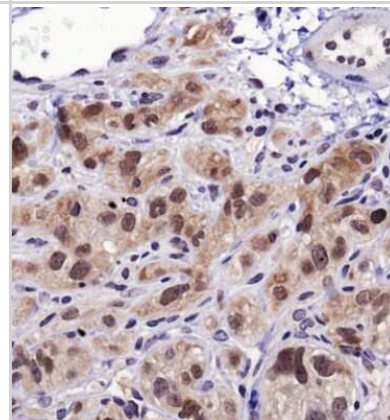
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS and 30% Glycerol
Product Description	
Host	Rabbit
Gene ID	3303
Gene Symbol	HSPA1A
Species	Human, Rat
Reactivity Notes	Use in Human reported in scientific literature (PMID:33760187).
Immunogen	A synthetic peptide made to a C-terminus portion of the human Hsp70 protein (between residues 600-641) [UniProt # P08107]
Product Application Details	
Applications	Western Blot, Simple Western, Electron Microscopy, Flow Cytometry, Immunohistochemistry, Immunohistochemistry-Paraffin, Block/Neutralize
Recommended Dilutions	Western Blot 1:1000, Simple Western 1:50, Flow Cytometry reported in scientific literature (PMID 33760187), Immunohistochemistry 1:400, Immunohistochemistry-Paraffin 1:400, Electron Microscopy reported in scientific literature (PMID 33335563), Block/Neutralize reported in scientific literature (PMID 30417859)
Application Notes	<p>This Hsp70 antibody is useful for Western blot and IHC-paraffin embedded sections.</p> <p>In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.</p>

## Images

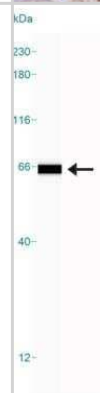
Western Blot: HSP70/HSPA1A Antibody [NBP1-77456] - Analysis of HSP70 in (1) human brain, (2) human liver, (3) human testes, (4) human skeletal muscle, and (5) human heart.



Immunohistochemistry: HSP70/HSPA1A Antibody [NBP1-77456] - Analysis of Hsp70 in human xenograft kidney cancer using DAB with hematoxylin counterstain.



Simple Western: HSP70/HSPA1A Antibody [NBP1-77456] - Lane view shows a specific band for Hsp70 in 1.0 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230kDa separation system.



## Publications

Chan L, Hsu W, Chen KY et al. Therapeutic Effect of Human Adipocyte-derived Stem Cell-derived Exosomes on a Transgenic Mouse Model of Parkinson's Disease In vivo (Athens, Greece) 2023-08-31 [PMID: 37652511] (Human, WB)

Ibrahim T, Wu P, Wang LJ et al. Sex-dependent differences in the genomic profile of lingual sensory neurons in naïve and tongue-tumor bearing mice Scientific Reports 2023-08-12 [PMID: 37573456] (IHC)

Ibrahim T, Wu P, Wang LJ et al. Sex-dependent Differences in the Genomic Profile of Lingual Sensory Neurons in Naïve and Tongue-Tumor Bearing Mice bioRxiv : the preprint server for biology 2023-05-14 [PMID: 36711730] (IHC-Fr, Mouse)

Chung CC, Chan L, Chen JH et al. Plasma extracellular vesicles tau and beta-amyloid as biomarkers of cognitive dysfunction of Parkinson's disease FASEB journal : official publication of the Federation of American Societies for Experimental Biology 2021-10-01 [PMID: 34478572]

Freund E, Miebach L, Stope MB, Bekeschus S Hypochlorous acid selectively promotes toxicity and the expression of danger signals in human abdominal cancer cells Oncology reports 2021-05-01 [PMID: 33760187] (FLOW, Human)

Aoki S, Harada K, Kawai S, et al. Expression of Heat Shock Proteins in Response to Mild Short-term Heat Shock in Human Deciduous Dental Pulp Fibroblast-like Cells Journal of Hard Tissue Biology 2021-01-26

Chung CC, Chan L, Chen JH et al. Neurofilament light chain level in plasma extracellular vesicles and Parkinson's disease Therapeutic advances in neurological disorders 2020-12-07 [PMID: 33335563] (EM, Human)

Chou SY, Chan L, Chung CC et al. Altered Insulin Receptor Substrate 1 Phosphorylation in Blood Neuron-Derived Extracellular Vesicles From Patients With Parkinson's Disease Frontiers in cell and developmental biology 2020-12-03 [PMID: 33344443] (Human)

Chung CC, Huang PH, Chan L et al. Plasma Exosomal Brain-Derived Neurotrophic Factor Correlated with the Postural Instability and Gait Disturbance-Related Motor Symptoms in Patients with Parkinson's Disease Diagnostics (Basel, Switzerland) 2020-09-11 [PMID: 32932791] (WB, Human)

Brewster LM, Coombs GB, Garcia VP et al. Effects of circulating extracellular microvesicles from spinal cord injured adults on endothelial cell function Clin. Sci. 2020-03-27 [PMID: 32219341] (Human)

Wu Hsing-Hsien, Huang Chien-Cheng, Chang Ching-Ping et al. Heat Shock Protein 70 (HSP70) Reduces Hepatic Inflammatory and Oxidative Damage in a Rat Model of Liver Ischemia/Reperfusion Injury with Hyperbaric Oxygen Preconditioning. Medical Science Monitor : International Medical Journal of Experimental and Clinical Research 2018-11-12 [PMID: 30417859] (B/N, Rat)



## Procedures

### Western Blot protocol specific for Hsp70 antibody (NBP1-77456)

HSP70/HSPA1A Antibody: [https://www.novusbio.com/products/hsp70-hspa1a-antibody\\_nbp1-77456](https://www.novusbio.com/products/hsp70-hspa1a-antibody_nbp1-77456)

#### Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions.

\*Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

### Immunohistochemistry-Paraffin protocol for HSP70/HSPA1A Antibody (NBP1-77456)

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#### Immunohistochemistry-Paraffin Embedded Sections

##### Antigen Unmasking:

Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes.

##### Staining:

1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

\*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.





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### **Products Related to NBP1-77456**

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NB820-59177	Human Brain Whole Tissue Lysate (Adult Whole Normal)
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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