abcam

ab247705

Anti-Hsp105/HSP110 antibody [EPR4577] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR4577
Purification technique	Affinity purification Protein A
Concentration	1.052 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	Antigen retrieval is recommended. Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information HSPH1

Function	Acts as a nucleotide-exchange factor (NEF) for chaperone proteins HSPA1A and HSPA1B, promoting the release of ADP from HSPA1A/B thereby triggering client/substrate protein release (PubMed:24318877). Prevents the aggregation of denatured proteins in cells under severe stress, on which the ATP levels decrease markedly. Inhibits HSPA8/HSC70 ATPase and chaperone activities (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab247705 is the carrier-free version of ab108625.

Species reactivity

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Hsp105 also known as HSP110 is a member of the heat shock protein family. With a molecular mass of approximately 105 kDa this protein functions as a molecular chaperone. It assists in the proper folding of proteins and prevents aggregation especially under stress conditions. Hsp105 is expressed in various tissues including the brain heart and skeletal muscles indicating its widespread roles in maintaining cellular protein homeostasis.
Biological function summary	Hsp105 plays an essential role in protein folding and stress responses. It forms part of a cellular complex that includes other chaperones like Hsp70 and Hsp40. This interaction is critical in refolding denatured proteins and preventing the accumulation of misfolded proteins. In the cell the chaperone activity of Hsp105 helps in managing protein quality control particularly during heat shock and other stress conditions.
Pathways	This protein integrates within signaling cascades associated with stress responses and apoptosis. It is an important player in the HSF1-mediated heat shock response pathway which regulates the expression of various heat shock proteins. Additionally Hsp105 interacts with proteins like Hsp70 within this pathway coordinating cellular mechanisms that protect against protein-damaging conditions. Another pathway in which Hsp105 is involved might be the ubiquitin-proteasome pathway facilitating the degradation of damaged proteins.
Associated diseases and disorders	Hsp105 has connections to neurodegenerative disorders and cancer. Studies show that its overexpression may link to tumor resistance against chemotherapy by stabilizing proteins involved in cell survival pathways. In neurodegenerative diseases like Alzheimer's Hsp105 binds to tau proteins potentially impacting their normal function and aggregation. It works alongside related proteins such as Hsp70 in these contexts highlighting its role in the pathogenesis and progression of these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

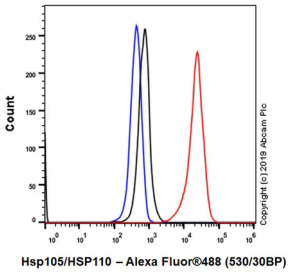
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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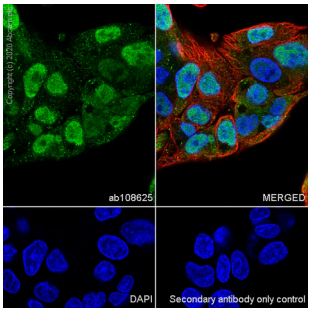
4 product images



Flow Cytometry (Intracellular) - Anti-Hsp105/HSP110 antibody [EPR4577] - BSA and Azide free (ab247705)

Hsp105/HSP110 Flow Cytometry (Intracellular) staining using rabbit Anti-Hsp105/HSP110 antibody

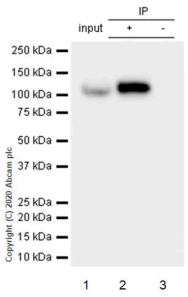
Intracellular Flow Cytometry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Hsp105/HSP110 with Purified ab108625 at 1/20 dilution (10µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108625).



Immunocytochemistry/ Immunofluorescence - Anti-Hsp105/HSP110 antibody [EPR4577] - BSA and Azide free (ab247705)

Hsp105/HSP110 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Hsp105/HSP110 antibody

Immunocytochemistry/ Immunofluorescence analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Hsp105/HSP110 with Purified ab108625 at 1:50 dilution (2.7 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108625).

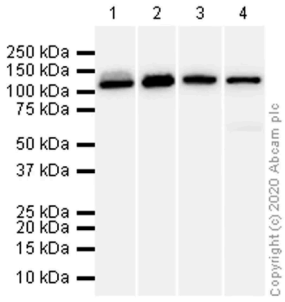


Immunoprecipitation - Anti-Hsp105/HSP110 antibody [EPR4577] - BSA and Azide free (ab247705)

Purified ab108625 at 1:20 dilution (0.6µg) immunoprecipitating Hsp105/HSP110 in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab108625 + HeLa whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab108625 in HeLa whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1:1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 105 kDa
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108625).

All lanes:
Immunoprecipitation - Anti-Hsp105/HSP110 antibody [EPR4577] (ab108625)

Predicted band size: 96 kDa



Western blot - Anti-Hsp105/HSP110 antibody [EPR4577] - BSA and Azide free (ab247705)

Blocking/Diluting buffer: 5% NFDM/TBST
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108625).

All lanes:
Western blot - Anti-Hsp105/HSP110 antibody [EPR4577] (ab108625) at 1/1000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
Caco-2 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
Human lung lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 96 kDa

Observed band size: 105 kDa

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