abcam

ab184818

Alexa Fluor® 488 Anti-Hexokinase 1 antibody [EPR10134(B)] - Mitochondrial Outer Membrane Marker

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR10134(B)
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50 - 1/500
Notes	ab199091 - Rabbit monoclonal IgG (Alexa FluorÂ® 488), is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information HK1

Function	Catalyzes the phosphorylation of various hexoses, such as D-glucose, D-glucosamine, D-fructose, D-mannose and 2-deoxy-D-glucose, to hexose 6-phosphate (D-glucose 6-phosphate, D-glucosamine 6-phosphate, D-fructose 6-phosphate, D-mannose 6-phosphate and 2-deoxy-D-glucose 6-phosphate, respectively) (PubMed:1637300, PubMed:25316723, PubMed:27374331). Does not phosphorylate N-acetyl-D-glucosamine (PubMed:27374331). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (By similarity). Involved in innate immunity and inflammation by acting as a pattern recognition receptor for bacterial peptidoglycan (PubMed:27374331). When released in the cytosol, N-acetyl-D-glucosamine component of bacterial peptidoglycan inhibits the hexokinase activity of HK1 and causes its dissociation from mitochondrial outer membrane, thereby activating the NLRP3 inflammasome (PubMed:27374331).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Stable for 12 months at -20°C, Store in the dark

Notes

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.

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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

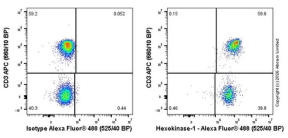
We do not recommend this combination. It is not covered by our product promise.

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.

5 product images



Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-Hexokinase 1 antibody [EPR10134(B)] - Mitochondrial Outer Membrane Marker (ab184818)

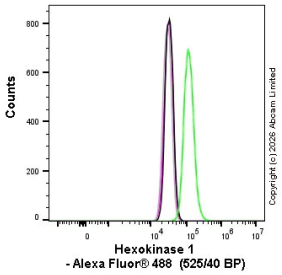
Hexokinase 1 Flow Cytometry (Intracellular) staining of Human peripheral mononuclear cells (PBMCs) using rabbit Anti-Hexokinase 1 antibody

Flow cytometry scatter plots showing human peripheral mononuclear cells (PBMCs), either stained with ab184818 (right) or isotype control (left). The cells were fixed and permeabilised using BD CytoFix/CytoPerm™ (20 min). The cells were incubated in 1x PBS containing 10 µg/ml

human IgG and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab184818) (1x 10^6 in 100µl at 0.2 µg/ml (1/2500)) for 30min on ice. Isotype control antibody was Recombinant Alexa Fluor® 488 Rabbit IgG, monoclonal [EPR25A] - Isotype Control. The cells were simultaneously stained with CD3.

Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

This data was acquired using a Beckman Coulter CytoFlexLX flow cytometer.



Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-Hexokinase 1 antibody [EPR10134(B)] - Mitochondrial Outer Membrane Marker (ab184818)

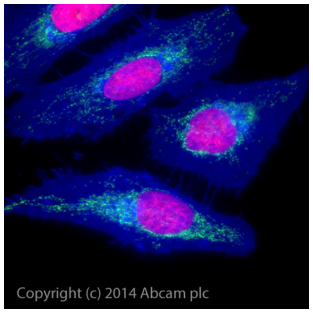
Hexokinase 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Hexokinase 1 antibody

Flow cytometry overlay histogram showing wild-type HEK293T (green line) and HK1 knockout HEK293T stained with ab184818 (magenta line). The cells were fixed with 80% methanol (5 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab184818) (1x 10^6 in 100µl at 1 µg/ml (1/500)) for 30min at 22°C.

Isotype control antibody was Recombinant Alexa Fluor® 488 Rabbit IgG, monoclonal [EPR25A] - Isotype Control (black line) in HEK293T WT cells (black line) and HEK293T-HK1 KO cells (grey line), used at the same concentration and conditions as the primary antibody.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

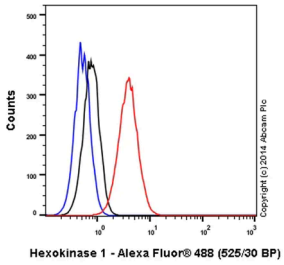
This antibody gave a positive signal in wild-type HEK293T fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min under the same conditions.



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Hexokinase 1 antibody [EPR10134(B)] - Mitochondrial Outer Membrane Marker (ab184818)

Hexokinase 1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Hexokinase 1 antibody

ab184818 staining Hexokinase 1 in HeLa cells. The cells were fixed with 4% PFA (10min) and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated with ab184818 at a working dilution of 1 in 100 overnight at +4°C (shown in green). AlexaFluor® 350 WGA was used at a 1/200 dilution and incubated for 1h with the cells, to label plasma membranes (shown in blue). Nuclear DNA was labelled in red with 1.25 µM DRAQ5™ (ab108410).

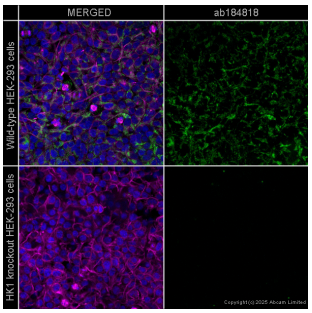


Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-Hexokinase 1 antibody [EPR10134(B)] - Mitochondrial Outer Membrane Marker (ab184818)

Hexokinase 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Hexokinase 1 antibody

Overlay histogram showing HeLa cells stained with ab184818 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab184818, 1/50 dilution) for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) Alexa Fluor® 488 used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.
Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

This antibody gave a positive signal in HeLa fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Hexokinase 1 antibody [EPR10134(B)] - Mitochondrial Outer Membrane Marker (ab184818)

Hexokinase 1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Hexokinase 1 antibody

Immunofluorescent analysis of 4% PFA-fixed 0.1% Triton X-100 permeabilized HEK-293 WT and HEK-293-HK1 KO cells labelling Hexokinase 1 with ab184818 at 0.2 µg/ml concentration (Green). Cells were counterstained with ab190573 Anti-Tubulin (Alexa Fluor® 647) at 1 : 250 (2 µg/ml) (Magenta). The nuclear counterstain was DAPI (Blue).

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