abcam

ab209847

Anti-Hexokinase II antibody [EPR20839]

Anti-Hexokinase II antibody [EPR20839] (ab209847) is a rabbit monoclonal antibody detecting Hexokinase II in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 110 publications

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR20839
Purification technique	Affinity purification Protein A
Concentration	0.579 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	Not recommended for rat and mouse tissues. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse, Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

WB

Tested

Species	Recombinant fragment - Human

Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human

Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/60
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Target data

See full target information HK2

Function	Catalyzes the phosphorylation of hexose, such as D-glucose and D-fructose, to hexose 6-phosphate (D-glucose 6-phosphate and D-fructose 6-phosphate, respectively) (PubMed:23185017, PubMed:26985301, PubMed:29298880). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (PubMed:29298880). Plays a key role in maintaining the integrity of the outer mitochondrial membrane by preventing the release of apoptogenic molecules from the intermembrane space and subsequent apoptosis (PubMed:18350175).

Storage

Shipped at conditions	Conditional Ambient

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

Notes

Product Specifications

Anti-Hexokinase II antibody [EPR20839] (ab209847) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), ICC/IF, IHC-P, IP, WB in human, mouse, rat samples. Anti-Hexokinase II antibody [EPR20839] (ab209847) specifically detects Hexokinase II (UniProt ID: P52789; Molecular weight: 102kDa) and is sold in 100 µL and 1 mL selling sizes.

Quality and Validation

Abcam's high quality manufacturing and validation processes ensure Anti-Hexokinase II antibody [EPR20839] (ab209847) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.
The specificity of Anti-Hexokinase II antibody [EPR20839] (ab209847) has been confirmed by testing in knockout samples.
Anti-Hexokinase II antibody [EPR20839] (ab209847) has been cited over 110 times in peer reviewed journals and is trusted by the scientific community.

Related Products
Conjugation-ready, carrier free format available for antibody clone EPR20839 - ab228819.
Antibody clone EPR20839 is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 647, HRP (ab237314, ab237315).

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.

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.

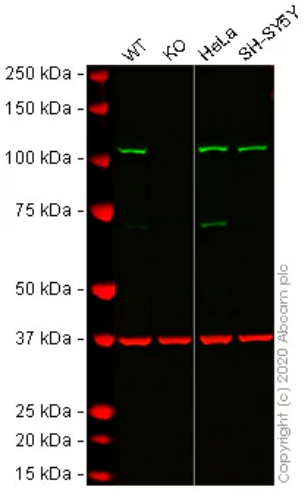
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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13 product images



Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II Western blot staining using rabbit Anti-Hexokinase II antibody

Lanes 1 - 4: Merged signal (red and green). Green - ab209847 observed at 105 kDa. Red - loading control ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.
ab209847 was shown to react with Anti-Hexokinase II in wild-type HCT 116 cells in western blot with loss of signal observed in HK2 knockout cell line ab273721 (HK2 knockout cell lysate ab275250). Wild-type and HK2 knockout HCT 116 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab209847 and ab8245 (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847) at 1/1000 dilution

Lane 1:
Wild-type HCT116 cell lysate at 20 µg

Lane 2:
Western blot - Human HK2 (Hexokinase II) knockout HCT116 cell lysate (ab275250) at 20 µg

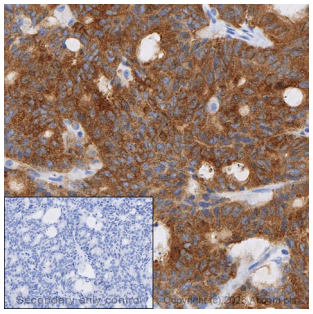
Lane 3:
HeLa cell lysate at 20 µg

Lane 4:
SH-SY5Y cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 102 kDa

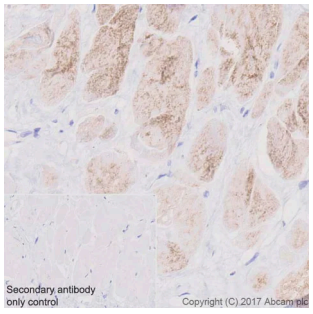
Observed band size: 105 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human invasive colon carcinoma using rabbit Anti-Hexokinase II antibody

Immunohistochemical analysis of formalin fixed paraffin embedded human invasive colon carcinoma labelling hexokinase II with ab209847 at a concentration of 0.5µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with a OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was performed with DISCOVERY cell conditioning solution (CC1) 100°C, pH8.5 for 32mins. ab209847 Anti-Hexokinase II antibody [EPR20839] was incubated for 16mins at 37°C. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.
Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual).

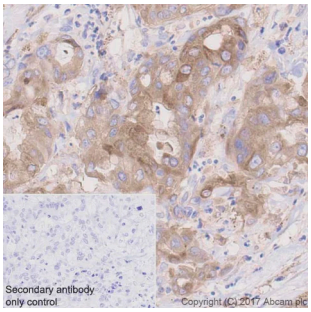


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Hexokinase II antibody

Immunohistochemical analysis of paraffin-embedded human heart tissue labeling Hexokinase II with ab209847 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Granularly cytoplasmic staining in human heart (PMID: 4058069; PMID: 26722360) is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

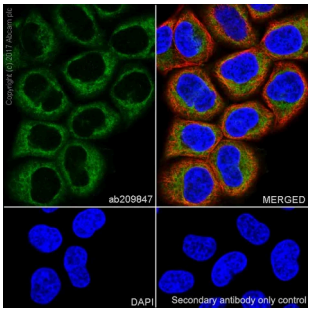


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Hexokinase II antibody

Immunohistochemical analysis of paraffin-embedded human pancreatic adenocarcinoma tissue labeling Hexokinase II with ab209847 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Strong cytoplasmic staining in human pancreatic adenocarcinoma (PMID: 26137268) is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

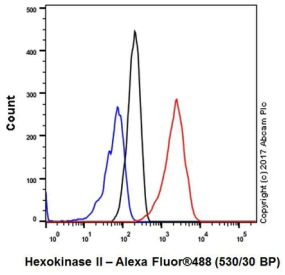


Immunocytochemistry/ Immunofluorescence - Anti-Hexokinase II antibody [EPR20839] (ab209847)

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

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labeling Hexokinase II with ab209847 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Cytoplasmic staining in HeLa cells.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

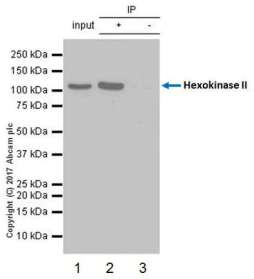
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Hexokinase II antibody [EPR20839] (ab209847)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling Hexokinase II with ab209847 at 1/60 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II was immunoprecipitated from 0.35 mg HeLa (humanepithelial cell line from cervix adenocarcinoma) whole cell lysate with ab209847 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab209847 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: HeLa whole cell lysate 10 µg (Input).
Lane 2: ab209847 IP in HeLa whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab209847 in HeLa whole cell lysate.

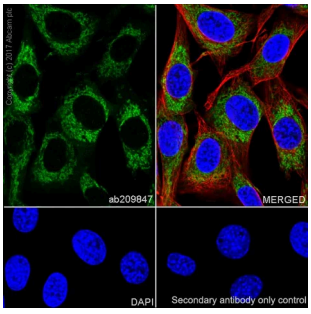
Exposure time: 30 seconds.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Predicted band size: 102 kDa

Observed band size: 102 kDa

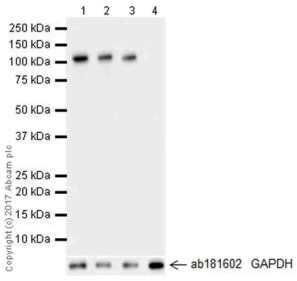


Immunocytochemistry/ Immunofluorescence - Anti-Hexokinase II antibody [EPR20839] (ab209847)

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

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (mouse embryonic fibroblast cell line) cells labeling Hexokinase II with ab209847 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Cytoplasmic staining in NIH/3T3 cells.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II Western blot staining using rabbit Anti-Hexokinase II antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.

All lanes:
Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847) at 1/1000 dilution

Lane 1:
HeLa (human epithelial cell line from cervix adenocarcinoma), whole cell lysate at 10 µg

Lane 2:
HKDC1-knockdown HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate at 10 µg

Lane 3:

Hexokinase I-knockdown HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate at 10 µg

Lane 4:
Hexokinase II-knockdown HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate at 10 µg

Secondary

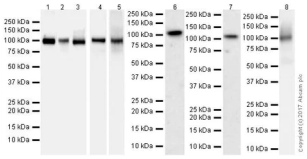
All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 102 kDa

Observed band size: 102 kDa

Exposure time: 41s



Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II Western blot staining using rabbit Anti-Hexokinase II antibody

Exposure times: Lanes 1-3,6,7: 3 minutes; Lanes 4,5,8: 58 seconds.

Blocking/Dilution buffer: 5% NFDM/TBST.

The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.

All lanes:
Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847) at 1/1000 dilution

Lane 1:
Rat testis lysate at 20 µg

Lane 2:
Rat muscle lysate at 20 µg

Lane 3:
SH-SY5Y (human neuroblastoma cell line from bone marrow), whole cell lysate at 20 µg

Lane 4:
Human testis lysate at 20 µg

Lane 5:
Mouse muscle lysate at 20 µg

Lane 6:
Human colon lysate at 10 µg

Lane 7:
Human fetal heart lysate at 10 µg

Lane 8:
NIH/3T3 (mouse embryonic fibroblast cell line), whole cell lysate at 10 µg

Secondary

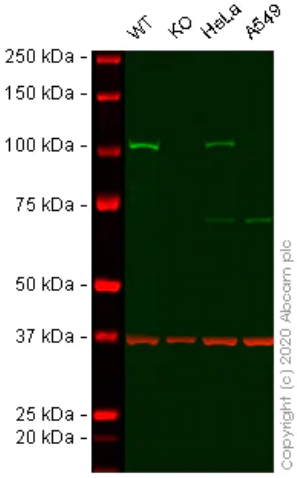
Lanes 1, 2, 3, 4, 5 and 8:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lanes 6 - 7:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/4000 dilution

Developed using the ECL technique.

Predicted band size: 102 kDa

Observed band size: 102 kDa



Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II Western blot staining using rabbit Anti-Hexokinase II antibody

Lanes 1 - 4: Merged signal (red and green). Green - ab209847 observed at 110 kDa. Red - loading control ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.
ab209847 was shown to react with Hexokinase II in wild-type HEK-293 cells in western blot with loss of signal observed in HK2 knockout sample. Wild-type and HK2 knockout HEK-293 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab209847 and ab8245 (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 Dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847) at 1/1000 dilution

Lane 1:
Wild-type HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate at 20 µg

Lane 2:
Western blot - Human HK2 (Hexokinase II) knockout HEK-293 cell lysate (ab281353) at 20 µg

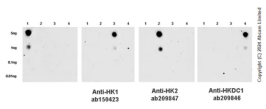
Lane 3:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 4:
A549 (Human lung carcinoma cell line) whole cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 102 kDa

Observed band size: 110 kDa



Dot Blot - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Hexokinase II Dot Blot staining using rabbit Anti-Hexokinase II antibody

Dot blot analysis of Hexokinase Type III/HK3 using ab321996 at 1:1000 (0.525 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:100,000 dilution.

Lane1: His-tagged human HK3 fragment
Lane2: His-tagged human HK2 fragment
Lane3: His-tagged human HK1 fragment
Lane4: His-tagged human HKDC1 fragment

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

This antibody does not cross-react with human HK1, HK2 and HKDC1.
All lanes:
Dot Blot - Anti-Hexokinase Type III/HK3 antibody [EPR29196-29] (ab321996) at 1/1000 dilution

Lane 1:
His-tagged human HK3 fragment at 5 ng

Lane 2:
His-tagged human HK2 fragment at 5 ng

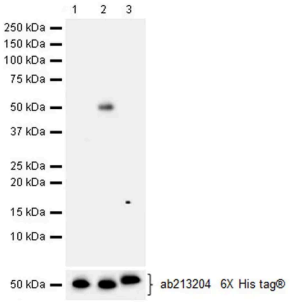
Lane 3:
His-tagged human HK1 fragment at 5 ng

Lane 4:
His-tagged human HKDC1 fragment at 5 ng

Secondary

All lanes:
Dot Blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Exposure time: 180s



Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847)

Blocking/dilution buffer and concentration: 5% NFDM/TBST.
The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.

All lanes:
Western blot - Anti-Hexokinase II antibody [EPR20839] (ab209847) at 1/10000 dilution

Lane 1:
HKDC1 recombinant protein (aa16-458) at 0.01 µg

Lane 2:
Hexokinase II recombinant protein (aa16-458) at 0.01 µg

Lane 3:
Hexokinase I recombinant protein (aa16-458) at 0.01 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 102 kDa

Observed band size: 50 kDa

Exposure time: 3min

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