

Product datasheet

Human HK1 (Hexokinase 1) knockout HEK-293T cell lysate ab257161

3 Images

Overview

Product name	Human HK1 (Hexokinase 1) knockout HEK-293T cell lysate
Product overview	Knockout cell lysate achieved by CRISPR/Cas9.
Parental Cell Line	HEK293T
Organism	Human
Mutation description	Knockout achieved by using CRISPR/Cas9, 1 bp insertion in exon10.
Passage number	<20
Knockout validation	Sanger Sequencing, Western Blot (WB)
Reconstitution notes	To use as WB control, resuspend the lyophilizate in 50 µL of LDS* Sample Buffer to have a final concentration of 2 mg/ml. For reducing conditions, we recommend a final concentration of 0.1 M DTT. <i>*Usage of SDS sample buffer is not recommended with these lyophilized lysates.</i>

Notes

Lysate preparation: Our lysates are made using RIPA buffer to which we add a protease inhibitor cocktail and phosphatase inhibitor cocktail (ratio: 300:100:10). *This means that the protein of interest is denatured.* If you require a native form of the protein please use the live cell version - found [here](#). Please refer to our lysis protocol for further details on how our lysates are prepared.

User storage instructions: Lyophilizate may be stored at 4°C. After reconstitution, store at -20°C for short-term storage or -80°C for long-term storage.

Access thousands of knockout cell lysates, generated from commonly used cancer cell lines.

[See here for more information on knockout cell lysates.](#)

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Tested applications **Suitable for:** WB

Properties

Storage instructions Store at -80°C. Please refer to protocols.

Components	1 kit
ab262062 - Human HK1 knockout HEK293T cell lysate	1 x 100µg
ab255553 - Human wild-type HEK293T cell lysate	1 x 100µg

Cell type epithelial

STR Analysis Amelogenin X D5S818: 8, 9 D13S317: 12, 14 D7S820: 11 D16S539: 9, 13 vWA: 16, 19 TH01: 7, 9.3 TPOX: 11 CSF1PO: 11, 12

Target

Tissue specificity Isoform 2 is erythrocyte specific. Isoform 3 and isoform 4 are testis-specific.

Pathway Carbohydrate metabolism; hexose metabolism.

Involvement in disease Hexokinase deficiency
Neuropathy, hereditary motor and sensory, Russe type

Sequence similarities Belongs to the hexokinase family.
Contains 2 hexokinase domains.

Domain The N- and C-terminal halves of this hexokinase show extensive sequence similarity to each other. The catalytic activity is associated with the C-terminus while regulatory function is associated with the N-terminus. Each domain can bind a single glucose and Gluc-6-P molecule.

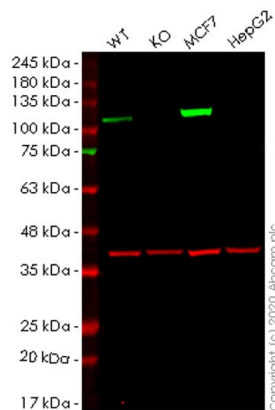
Cellular localization Mitochondrion outer membrane. Its hydrophobic N-terminal sequence may be involved in membrane binding.

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab257161 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 102 kDa.

Images



Western blot - Human HK1 knockout HEK293T cell lysate (ab257161)

Lane 1: Wild-type HEK293T cell lysate (20 µg)

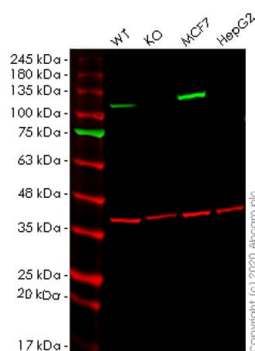
Lane 2: HK1 knockout HEK293T cell lysate (20 µg)

Lane 3: MCF7 cell lysate (20 µg)

Lane 4: HepG2 cell lysate (20 µg)

Lanes 1-4: Merged signal (red and green). Green - **ab154839** observed at 102 kDa. Red - loading control, **ab8245** observed at 37 kDa.

ab154839 Anti-Hexokinase 1 antibody [EPR10135(B)] was shown to specifically react with Hexokinase 1 in wild-type HEK293T cells. Loss of signal was observed when knockout cell line **ab267279** (knockout cell lysate ab257161) was used. Wild-type and Hexokinase 1 knockout samples were subjected to SDS-PAGE. **ab154839** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 10000 dilution for 1 hour at room temperature before imaging.



Western blot - Human HK1 knockout HEK293T cell lysate (ab257161)

Lane 1: Wild-type HEK293T cell lysate (20 µg)

Lane 2: HK1 knockout HEK293T cell lysate (20 µg)

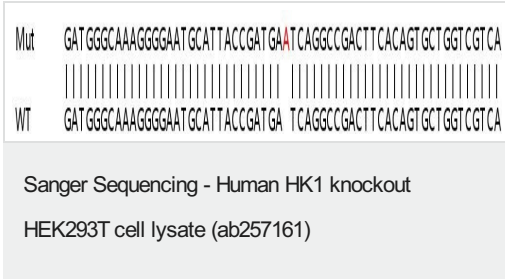
Lane 3: MCF7 cell lysate (20 µg)

Lane 4: HepG2 cell lysate (20 µg)

Lanes 1-4: Merged signal (red and green). Green - **ab150423** observed at 102 kDa. Red - loading control, **ab8245** observed at 37 kDa.

ab150423 Anti-Hexokinase 1 antibody [EPR10134(B)] - Mitochondrial was shown to specifically react with Hexokinase 1 in wild-type HEK293T cells. Loss of signal was observed when knockout cell line **ab267279** (knockout cell lysate ab257161) was used. Wild-type and Hexokinase 1 knockout samples were subjected to SDS-PAGE. **ab150423** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in

10000 dilution for 1 hour at room temperature before imaging.



Homozygous: 1 bp insertion in exon10

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