abcam

Product datasheet

Human IPO4 (Importin4/Imp4) knockout HEK-293T cell lysate ab258005

3 Images

Overview

Product name	Human IPO4 (Importin4/Imp4) 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, 10 bp deletion in exon4 and 1 bp insertion in exon4.
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. **Usage of SDS sample buffer is not recommended with these lyophilized lysates.*
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.** Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses. This product is subject to limited use licenses from The Broad Institute, ERS Genomics Limited and Sigma-Aldrich Co. LLC, and is developed with patented technology. For full details of the licenses and patents please refer to our **limited use license** and **patent pages**.
Tested applications	**Suitable for:** WB

Properties

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

Components	1 kit
ab261114 - Human IPO4 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

Function Functions in nuclear protein import as nuclear transport receptor. Serves as receptor for nuclear localization signals (NLS) in cargo substrates. Is thought to mediate docking of the importin/substrate complex to the nuclear pore complex (NPC) through binding to nucleoporin and the complex is subsequently translocated through the pore by an energy requiring, Ran-dependent mechanism. At the nucleoplasmic side of the NPC, Ran binds to the importin, the importin/substrate complex dissociates and importin is re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran. The directionality of nuclear import is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus (By similarity). Mediates the nuclear import of RPS3A. In vitro, mediates the nuclear import of human cytomegalovirus UL84 by recognizing a non-classical NLS.

Sequence similarities Belongs to the importin beta family.
Contains 6 HEAT repeats.
Contains 1 importin N-terminal domain.

Cellular localization Cytoplasm. Nucleus.

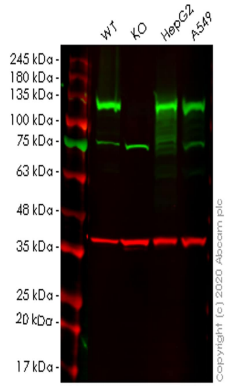
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab258005 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: 119 kDa.

Images



Western blot - Human IPO4 knockout HEK293T cell lysate (ab258005)

Lane 1: Wild-type HEK293T cell lysate (20 ug)
Lane 2: IPO4knockout HEK293T cell lysate (20 ug)
Lane 3: HepG2 cell lysate (20 ug)
Lane 4: A549 cell lysate (20 ug)

ab181046 was shown to specifically react with Importin4/Imp4 in wild-type HEK293T cells. Loss of signal was observed when knockout cell line **ab266175** (knockout cell lysate ab258005) was used. Wild-type and Importin4/Imp4 knockout samples were subjected to SDS-PAGE. **ab181046** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4^{O}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 20000 dilution for 1 hour at room temperature before imaging.

Sanger Sequencing - Human IPO4 knockout HEK293T cell lysate (ab258005)

Allele-1: 10 bp deletion in exon4

Sanger Sequencing - Human IPO4 knockout HEK293T cell lysate (ab258005)

Allele-2: 1 bp insertion in exon4

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