abcam

Product datasheet

Human NDUFA13 (GRIM19) knockout HeLa cell lysate ab257136

5 Images

Overview

Product name	Human NDUFA13 (GRIM19) knockout HeLa cell lysate
Product overview	Knockout cell lysate achieved by CRISPR/Cas9.
Parental Cell Line	HeLa
Organism	Human
Mutation description	Knockout achieved by using CRISPR/Cas9, 2 bp deletion in exon2 and 73 bp insertion in exon2 and 8 bp deletion in exon2.
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
ab261995 - Human NDUFA13 knockout HeLa cell lysate	1 x 100µg
ab255929 - Human wild-type HeLa cell lysate	1 x 100µg

Cell type epithelial

Disease Adenocarcinoma

Gender Female

STR Analysis Amelogenin X D5S818: 11, 12 D13S317: 12, 13.3 D7S820: 8, 12 D16S539: 9, 10 vWA: 16, 18 TH01: 7 TPOX: 8,12 CSF1PO: 9, 10

Target

Function Accessory subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I), that is believed not to be involved in catalysis. Complex I functions in the transfer of electrons from NADH to the respiratory chain. The immediate electron acceptor for the enzyme is believed to be ubiquinone. Involved in the interferon/all-trans-retinoic acid (IFN/RA) induced cell death. This apoptotic activity is inhibited by interaction with viral IRF1. Prevents the transactivation of STAT3 target genes. May play a role in CARD15-mediated innate mucosal responses and serve to regulate intestinal epithelial cell responses to microbes.

Tissue specificity Widely expressed, with highest expression in heart, skeletal muscle, liver, kidney and placenta. In intestinal mucosa, down-regulated in areas involved in Crohn disease and ulcerative colitis.

Involvement in disease Defects in NDUFA13 may be a cause of susceptibility to Hurthle cell thyroid carcinoma (HCTC) [MIM:607464]. Hurthle cell thyroid carcinoma accounts for approximately 3% of all thyroid cancers. Although they are classified as variants of follicular neoplasms, they are more often multifocal and somewhat more aggressive and are less likely to take up iodine than are other follicular neoplasms.

Sequence similarities Belongs to the complex I NDUFA13 subunit family.

Developmental stage Expressed in numerous fetal tissues.

Cellular localization Mitochondrion inner membrane. Nucleus. May be translocated into the nucleus upon IFN/RA treatment.

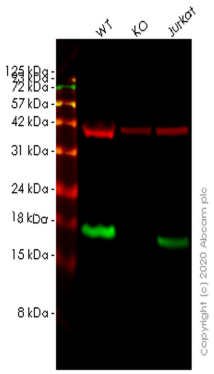
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab257136 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: 17 kDa.

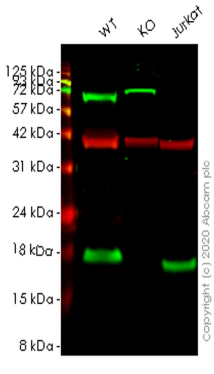
Images



Western blot - Human NDUFA13 knockout HeLa cell lysate (ab257136)

Lane 1: Wild-type HeLa cell lysate (20 ug)
Lane 2: NDUFA13 knockout HeLa cell lysate (20 ug)
Lane 3: Jurkat cell lysate (20 ug)

ab109017 was shown to specifically react with GRIM19 in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265863** (knockout cell lysate ab257136) was used. Wild-type and GRIM19 knockout samples were subjected to SDS-PAGE. **ab109017** 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 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Human NDUFA13 knockout HeLa cell lysate (ab257136)

Lane 1: Wild-type HeLa cell lysate (20 ug)
Lane 2: NDUFA13 knockout HeLa cell lysate (20 ug)
Lane 3: Jurkat cell lysate (20 ug)

ab110240 was shown to specifically react with GRIM19 in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265863** (knockout cell lysate ab257136) was used. Wild-type and GRIM19 knockout samples were subjected to SDS-PAGE. **ab110240** and Anti-GAPDH antibody[EPR16891] - Loading Control (**ab181602**) 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® 680RD) preadsorbed (**ab216777**) and Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (**ab216772**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

Sanger Sequencing - Human NDUFA13 knockout

HeLa cell lysate (ab257136)

Allele-1: 8 bp deletion in exon2

Sanger Sequencing - Human NDUFA13 knockout

HeLa cell lysate (ab257136)

Allele-2: 2 bp deletion in exon2

Sanger Sequencing - Human NDUFA13 knockout

HeLa cell lysate (ab257136)

Allele-3: 73 bp insertion in exon2

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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