abcam

Product datasheet

Human CAT (Catalase) knockout HeLa cell lysate ab256859

5 Images

Overview

Product name	Human CAT (Catalase) 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, 1 bp deletion in exon1 and 4 bp deletion in exon1 and Insertion of the selection cassette in exon1.
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
ab260158 - Human CAT 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 Occurs in almost all aerobically respiring organisms and serves to protect cells from the toxic effects of hydrogen peroxide. Promotes growth of cells including T-cells, B-cells, myeloid leukemia cells, melanoma cells, mastocytoma cells and normal and transformed fibroblast cells.

Involvement in disease Defects in CAT are the cause of acatalasia (ACATLAS) [MIM:115500]; also known as acatalasemia. This disease is characterized by absence of catalase activity in red cells and is often associated with ulcerating oral lesions.

Sequence similarities Belongs to the catalase family.

Post-translational modifications The N-terminus is blocked.

Cellular localization Peroxisome.

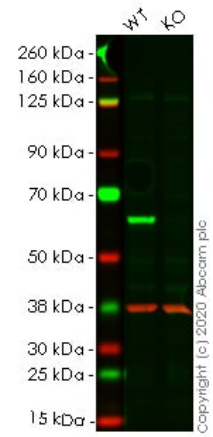
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab256859 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: 60 kDa.

Images



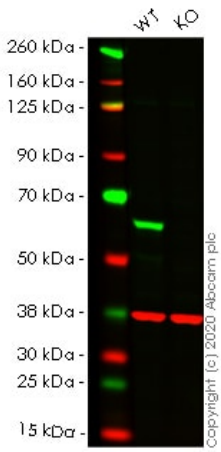
Western blot - Human CAT knockout HeLa cell lysate (ab256859)

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

Lane 2: CAT knockout HeLa cell lysate (20 µg)

Lanes 1-2: Merged signal (red and green). Green - **ab209211** observed at 60 kDa. Red - loading control **ab8245** observed at 37 kDa.

ab209211 Anti-Catalase antibody [EPR20198] was shown to specifically react with Catalase in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265250** (knockout cell lysate ab256859) was used. Wild-type and Catalase knockout samples were subjected to SDS-PAGE. **ab209211** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 2000 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 CAT knockout HeLa cell lysate (ab256859)

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

Lane 2: CAT knockout HeLa cell lysate (20 µg)

Lanes 1-2: Merged signal (red and green). Green - **ab76024** observed at 60 kDa. Red - loading control **ab8245** observed at 37 kDa.

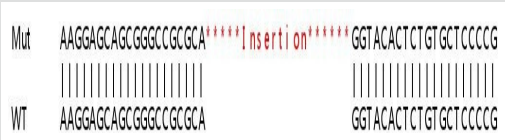
ab76024 Anti-Catalase antibody [EP1929Y] - Peroxisome Marker was shown to specifically react with Catalase in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265250** (knockout cell lysate ab256859) was used. Wild-type and Catalase knockout samples were subjected to SDS-PAGE. **ab76024** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 10000 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 CAT knockout HeLa cell lysate (ab256859)

Allele-1: 4 bp deletion in exon1

Sanger Sequencing - Human CAT knockout HeLa cell lysate (ab256859)

Allele-2: 1 bp deletion in exon1



Sanger Sequencing - Human CAT knockout HeLa cell lysate (ab256859)

Allele-3: Insertion of the selection cassette in exon1

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