

## Product datasheet

# Human CAT (Catalase) knockout HeLa cell pellet ab278971

[5 Images](#)

### Overview

<b>Product name</b>	Human CAT (Catalase) knockout HeLa cell pellet
<b>Product overview</b>	<p>Abcam's knockout cell pellets give you access to native proteins, without the need to culture cells. Our knockout cell pellets are prepared from our single-gene knockout cell lines and provide an additional offering to our cell lysates.</p> <p>Cells are snap-frozen to provide high quality pellets that are suitable for extraction with alternative lysis buffers or for preparation of lysates from subcellular fractions. Our knockout cell pellets are suitable for a variety of applications, including PCR, gene expression profiling and DNA library preparation.</p>
<b>Parental Cell Line</b>	HeLa
<b>Organism</b>	Human
<b>Mutation description</b>	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.
<b>Passage number</b>	<20
<b>Knockout validation</b>	Sanger Sequencing, Western Blot (WB)
<b>Notes</b>	<p><b>Pellet size:</b> 5 million cells/vial.</p> <p>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 <a href="#">limited use license</a> and <a href="#">patent pages</a>.</p>
<b>Tested applications</b>	<b>Suitable for:</b> WB

### Properties

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

Components	
Human wild-type HeLa cell pellet	1 x 1vial
Human CAT knockout HeLa cell pellet	1 x 1vial

<b>Cell type</b>	epithelial
<b>Disease</b>	Adenocarcinoma
<b>Gender</b>	Female
<b>STR Analysis</b>	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

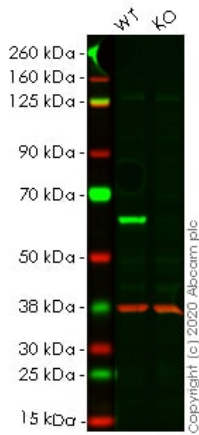
<b>Function</b>	Occurs in almost all aerobically respiring organisms and serves to protect cells from the toxic effects of hydrogen peroxide. Promotes growth of cells including T-cells, B-cells, myeloid leukemia cells, melanoma cells, mastocytoma cells and normal and transformed fibroblast cells.
<b>Involvement in disease</b>	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.
<b>Sequence similarities</b>	Belongs to the catalase family.
<b>Post-translational modifications</b>	The N-terminus is blocked.
<b>Cellular localization</b>	Peroxisome.

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab278971 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
<b>WB</b>		Use at an assay dependent concentration. Predicted molecular weight: 60 kDa.

## Images



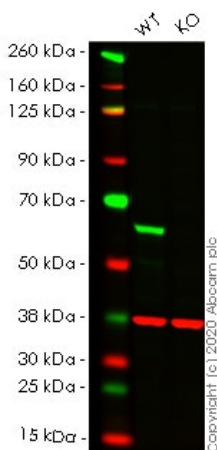
Western blot - Human CAT (Catalase) knockout HeLa cell pellet (ab278971)

**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 (Catalase) knockout HeLa cell pellet (ab278971)

**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.

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Mut  GCAGCACTGGAAGGAGCAGCGGGCCGCGCA- ---CACTCTGTGCTCCCCGAGCGGGCCCG
      |||
WT   GCAGCACTGGAAGGAGCAGCGGGCCGCGCAGGTACACTCTGTGCTCCCCGAGCGGGCCCG
  
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Sanger Sequencing - Human CAT (Catalase) knockout HeLa cell pellet (ab278971)

Allele-1: 4 bp deletion in exon1

Mut	GCAGCACTGGAAGGAGCAGCGGGCCGCGCA-GTACACTCTGTGCTCCCCGAGCGGGCCCG
WT	GCAGCACTGGAAGGAGCAGCGGGCCGCGCAGGTACACTCTGTGCTCCCCGAGCGGGCCCG

Allele-2: 1 bp deletion in exon1

Sanger Sequencing - Human CAT (Catalase)  
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Mut	AAGGAGCAGCGGGCCGCGCA*****Insertion*****GGTACACTCTGTGCTCCCCG
WT	AAGGAGCAGCGGGCCGCGCA GGTACACTCTGTGCTCCCCG

Allele-3: Insertion of the selection cassette in exon1

Sanger Sequencing - Human CAT (Catalase)  
knockout HeLa cell pellet (ab278971)

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

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