abcam

Product datasheet

# Human CEACAM1 knockout A549 cell line ab267046

5 Images

## Overview

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| **Product name** | Human CEACAM1 knockout A549 cell line |
| **Parental Cell Line** | A549 |
| **Organism** | Human |
| **Mutation description** | Knockout achieved by using CRISPR/Cas9, 1 bp insertion in exon 3 and 2 bp insertion in exon 3 and 5 bp deletion in exon 3 |
| **Passage number** | <20 |
| **Knockout validation** | Sanger Sequencing, Western Blot (WB) |
| **Tested applications** | **Suitable for:** WB |
| **Biosafety level** | 2 |
| **General notes** | **Recommended control:** Human wild-type A549 cell line (**ab255450**). Please note a wild-type cell line is not automatically included with a knockout cell line order, if required please add recommended wild-type cell line at no additional cost using the code WILDTYPE-TMTK1.<br><br>**Cryopreservation cell medium:** Cell Freezing Medium-DMSO Serum free media, contains 8.7% DMSO in MEM supplemented with methyl cellulose.<br><br>**Culture medium:** F-12K + 10% FBS<br><br>**Initial handling guidelines:** Upon arrival, the vial should be stored in liquid nitrogen vapor phase and not at -80°C. Storage at -80°C may result in loss of viability.<br><br>1. Thaw the vial in 37°C water bath for approximately 1-2 minutes.<br>2. Transfer the cell suspension (0.8 mL) to a 15 mL/50 mL conical sterile polypropylene centrifuge tube containing 8.4 mL pre-warmed culture medium, wash vial with an additional 0.8 mL culture medium (total volume 10 mL) to collect remaining cells, and centrifuge at 201 x g (rcf) for 5 minutes at room temperature. 10 mL represents minimum recommended dilution. 20 mL represents maximum recommended dilution.<br>3. Resuspend the cell pellet in 5 mL pre-warmed culture medium and count using a haemocytometer or alternative cell counting method. Based on cell count, seed cells in an appropriate cell culture flask at a density of $2x10^3$-$1x10^4$ cells/$cm^2$. Seeding density is given as a guide only and should be scaled to align with individual lab schedules.<br>4. Incubate the culture at 37°C incubator with 5% $CO_2$. Cultures should be monitored daily.<br><br>**Subculture guidelines:**<br><br>All seeding densities should be based on cell counts gained by established methods.<br>A guide seeding density of $6x10^4$ cells/$cm^2$ is recommended.<br>A partial media change 24 hours prior to subculture may be helpful to encourage growth, if |

required.
Cells should be passaged when they have achieved 80-90% confluence.
Do not exceed $7x10^4$ cells/$cm^2$.
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We will provide viable cells that proliferate on revival.

## Properties

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| **Number of cells** | 1 x $10^6$ cells/vial, 1 mL |
| **Adherent /Suspension** | Adherent |
| **Tissue** | Lung |
| **Cell type** | epithelial |
| **Disease** | Carcinoma |
| **Gender** | Male |
| **STR Analysis** | Amelogenin X,Y D5S818: 11 D13S317: 11 D7S820: 8, 11 D16S539: 11, 12 vWA: 14 TH01: 8,9.3 TPOX: 8,11 CSF1PO: 10, 12 |
| **Antibiotic resistance** | Puromycin 1.00µg/ml |
| **Mycoplasma free** | Yes |
| **Storage instructions** | Shipped on Dry Ice. Store in liquid nitrogen. |
| **Storage buffer** | Constituents: 8.7% Dimethylsulfoxide, 2% Cellulose, methyl ether |

## Target

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| **Sequence similarities** | Belongs to the immunoglobulin superfamily. CEA family.<br>Contains 3 Ig-like C2-type (immunoglobulin-like) domains.<br>Contains 1 Ig-like V-type (immunoglobulin-like) domain. |
| **Cellular localization** | Secreted; Cell membrane and Cell membrane. Localizes to sites of cell-cell contact. |
| **Form** | There are 11 isoforms produced by alternative splicing. Isoform 1 = BGPa; CEACAM1-4L; TM1-CEA; Isoform 2 = BGPg; CEACAM1-4C1; Isoform 3 = BGPh; CEACAM1-3; Isoform 4 = BGPi; CEACAM1-3C2; Isoform 5 = BGPy; CEACAM1-3AL; Isoform 6 = BGPb; CEACAM1-3L; TM2-CEA; Isoform 7 = BGPx; CEACAM1-1L; Isoform 8 = BGPc; CEACAM1-4S; TM3-CEA; Isoform 9 = BGPz; CEACAM1-3AS and Isoform 11 = BGPd; CEACAM1-3S. |

## Applications

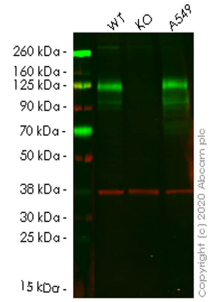
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab267046 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| | | |

| Application | Abreviews | Notes |
|---|---|---|
| **WB** | | Use at an assay dependent concentration. Predicted molecular weight: 57 kDa. |

## Images




Western blot - Human CEACAM1 knockout A549 cell line (ab267046)

**All lanes :** Anti-CEACAM1 antibody [EPR4049] (**ab108397**) at 1/1000 dilution

**Lane 1 :** Wild-type A549 cell lysate
**Lane 2 :** CEACAM1 knockout A549 cell lysate
**Lane 3 :** A549 cell lysate

Lysates/proteins at 20 µg per lane.

**Secondary**
**All lanes :** Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/10000 dilution

**Predicted band size:** 57 kDa
**Observed band size:** 100-180 kDa

**Lanes 1-4:** Merged signal (red and green). Green - **ab108397** observed at 100-180 kDa. Red - loading control **ab8245** observed at 36 kDa.

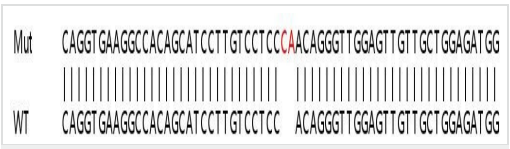
**ab108397** Anti-CEACAM1 antibody [EPR4049] was shown to specifically react with CEACAM1 in wild-type A549 cells. Loss of signal was observed when knockout cell line ab267046 (knockout cell lysate **ab257388**) was used. Wild-type and CEACAM1 knockout samples were subjected to SDS-PAGE. **ab108397** 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.


Sanger Sequencing - Human CEACAM1 knockout A549 cell line (ab267046)

Allele-1: 5 bp deletion in exon3

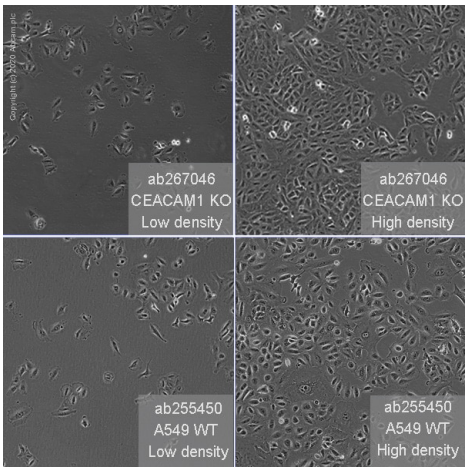

Sanger Sequencing - Human CEACAM1 knockout A549 cell line (ab267046)

Allele-2: 1 bp insertion in exon 3.




Sanger Sequencing - Human CEACAM1 knockout A549 cell line (ab267046)

Allele-3: 2 bp insertion in exon 3.




Cell Culture - Human CEACAM1 knockout A549 cell line (ab267046)

Representative images of CEACAM1 knockout A549 cells, low and high confluency examples (top left and right respectively) and wild-type A549 cells, low and high confluency (bottom left and right respectively) showing typical adherent, epithelial-like morphology. Images were captured at 10X magnification using an EVOS M5000 microscope.



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