

# Human SELENBP1 (Selenium Binding Protein 1/SBP) knockout HeLa cell line ab265279

3 Images

### Overview

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<b>Product name</b>	Human SELENBP1 (Selenium Binding Protein 1/SBP) knockout HeLa cell line
<b>Parental Cell Line</b>	HeLa
<b>Organism</b>	Human
<b>Mutation description</b>	Knockout achieved by using CRISPR/Cas9, 11 bp deletion in exon 2 and 1 bp insertion in exon 2
<b>Passage number</b>	<20
<b>Knockout validation</b>	Sanger Sequencing, Western Blot (WB)
<b>Tested applications</b>	<b>Suitable for:</b> WB
<b>Biosafety level</b>	2
<b>General notes</b>	<p><b>Recommended control:</b> Human wild-type HeLa cell line (<a href="#">ab255928</a>). 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.</p> <p><b>Cryopreservation cell medium:</b> Cell Freezing Medium-DMSO Serum free media, contains 8.7% DMSO in MEM supplemented with methyl cellulose.</p> <p><b>Culture medium:</b> DMEM (High Glucose) + 10% FBS</p> <p><b>Initial handling guidelines:</b> 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.</p> <ol style="list-style-type: none"><li>1. Thaw the vial in 37°C water bath for approximately 1-2 minutes.</li><li>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.</li><li>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 <math>2 \times 10^4</math> cells/cm<sup>2</sup>. Seeding density is given as a guide only and should be scaled to align with individual lab schedules.</li><li>4. Incubate the culture at 37°C incubator with 5% CO<sub>2</sub>. Cultures should be monitored daily.</li></ol> <p><b>Subculture guidelines:</b></p> <p>All seeding densities should be based on cell counts gained by established methods. A guide seeding density of <math>2 \times 10^4</math> cells/cm<sup>2</sup> is recommended.</p>

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.

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We will provide viable cells that proliferate on revival.

## Properties

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<b>Number of cells</b>	1 x 10 <sup>6</sup> cells/vial, 1 mL
<b>Adherent /Suspension</b>	Adherent
<b>Tissue</b>	Cervix
<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 WWA: 16, 18 TH01: 7 TPOX: 8, 12 CSF1PO: 9, 10
<b>Mycoplasma free</b>	Yes
<b>Storage instructions</b>	Shipped on Dry Ice. Store in liquid nitrogen.
<b>Storage buffer</b>	Constituents: 8.7% Dimethylsulfoxide, 2% Cellulose, methyl ether

## Target

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<b>Function</b>	Selenium-binding protein which may be involved in the sensing of reactive xenobiotics in the cytoplasm. May be involved in intra-Golgi protein transport.
<b>Tissue specificity</b>	Highly expressed in liver, lung, colon, prostate, kidney and pancreas. In brain, present both in neurons and glia (at protein level). Down-regulated in lung adenocarcinoma, colorectal carcinoma and ovarian cancer. Two-fold up-regulated in brain and blood from schizophrenia patients.
<b>Sequence similarities</b>	Belongs to the selenium-binding protein family.
<b>Post-translational modifications</b>	Phosphorylated. The N-terminus is blocked.
<b>Cellular localization</b>	Nucleus. Cytoplasm > cytosol. Membrane. May associate with Golgi membrane. May associate with the membrane of autophagosomes.

## Applications

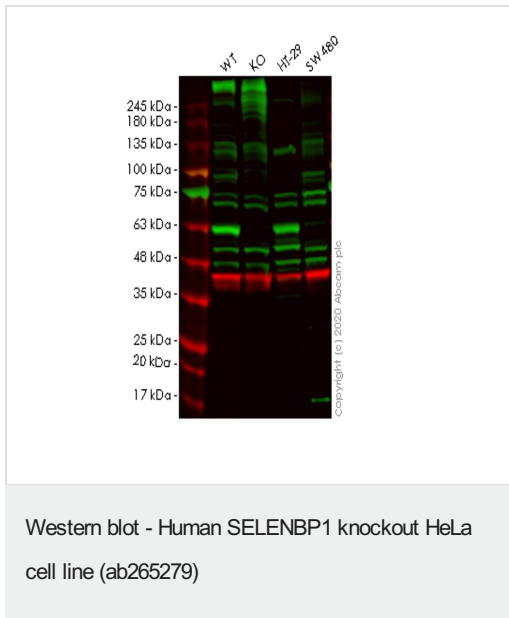
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**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab265279 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes

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WB		Use at an assay dependent concentration. Predicted molecular weight: 52 kDa.

**Images**



**All lanes** : Anti-Selenium Binding Protein 1/SBP antibody ([ab90135](#)) at 1/500 dilution

- Lane 1** : Wild-type HeLa cell lysate
- Lane 2** : SELENBP1 knockout HeLa cell lysate
- Lane 3** : HT-29 cell lysate
- Lane 4** : SW 480 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:** 52 kDa  
**Observed band size:** 60 kDa

**Lanes 1-3:** Merged signal (red and green). Green - [ab90135](#) observed at 60 kDa. Red - loading control [ab8245](#) observed at 36 kDa.

[ab90135](#) Anti-Selenium Binding Protein 1/SBP antibody was shown to specifically react with Selenium Binding Protein 1/SBP in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265279 (knockout cell lysate [ab257662](#)) was used. Wild-type and Selenium Binding Protein 1/SBP knockout samples were subjected to SDS-PAGE. [ab90135](#) and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) were incubated overnight at 4°C at 1 in 500 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.

```
Mut  AATTGTGGACCCGGCTACTCCACCCCTC-----AAAGGTAAATGCCCATGGTCT
      |||
WT   AATTGTGGACCCGGCTACTCCACCCCTCTGGAGGCCATGAAAGGTAAATGCCCATGGTCT
```

Allele-1: 11 bp deletion in exon 2.

Sanger Sequencing - Human SELENBP1 knockout

HeLa cell line (ab265279)

```
Mut  AATTGTGGACCCGGCTACTCCACCCCTCATGGAGGCCATGAAAGGTAAATGCCCATGGTCT
      |||
WT   AATTGTGGACCCGGCTACTCCACCCCTC TGGAGGCCATGAAAGGTAAATGCCCATGGTCT
```

Allele-2: 1 bp insertion in exon 2.

Sanger Sequencing - Human SELENBP1 knockout

HeLa cell line (ab265279)

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

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