

## Product datasheet

# Human LMNB1 (Lamin B1) knockout HeLa cell lysate ab263825

4 Images

### Overview

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<b>Product name</b>	Human LMNB1 (Lamin B1) knockout HeLa cell lysate
<b>Product overview</b>	Knockout cell lysate achieved by CRISPR/Cas9.
<b>Parental Cell Line</b>	HeLa
<b>Organism</b>	Human
<b>Mutation description</b>	Knockout achieved by using CRISPR/Cas9, 2 bp deletion in exon 1 and 2 bp insertion in exon 1.
<b>Passage number</b>	<20
<b>Knockout validation</b>	Sanger Sequencing, Western Blot (WB)
<b>Reconstitution notes</b>	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. <i>*Usage of SDS sample buffer is not recommended with these lyophilized lysates.</i>

### 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.](#)**

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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.

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### Tested applications

**Suitable for:** WB

## Properties

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

Components	1 kit
ab255508 - Human LMNB1 knockout HeLa cell lysate	1 x 100µg
ab255552 - 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 WWA: 16, 18 TH01: 7 TPOX: 8, 12 CSF1PO: 9, 10

## Target

**Function** Lamins are components of the nuclear lamina, a fibrous layer on the nucleoplasmic side of the inner nuclear membrane, which is thought to provide a framework for the nuclear envelope and may also interact with chromatin.

**Involvement in disease** Defects in LMNB1 are the cause of leukodystrophy demyelinating autosomal dominant adult-onset (ADLD) [MIM:169500]. ADLD is a slowly progressive and fatal demyelinating leukodystrophy, presenting in the fourth or fifth decade of life. Clinically characterized by early autonomic abnormalities, pyramidal and cerebellar dysfunction, and symmetric demyelination of the CNS. It differs from multiple sclerosis and other demyelinating disorders in that neuropathology shows preservation of oligodendroglia in the presence of subtotal demyelination and lack of astrogliosis.

**Sequence similarities** Belongs to the intermediate filament family.

**Post-translational modifications** B-type lamins undergo a series of modifications, such as farnesylation and phosphorylation. Increased phosphorylation of the lamins occurs before envelope disintegration and probably plays a role in regulating lamin associations.

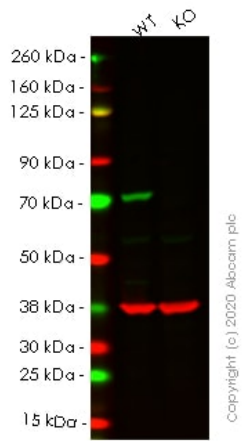
**Cellular localization** Nucleus inner membrane.

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab263825 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.

## Images



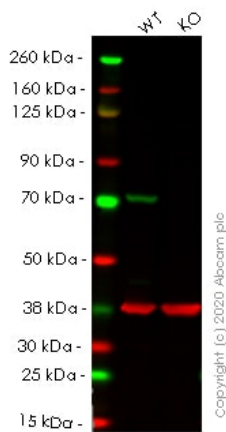
Western blot - Human LMNB1 (Lamin B1) knockout HeLa cell lysate (ab263825)

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

**Lane 2:** LMNB1 knockout HeLa cell lysate (20µg)

**Lanes 1- 2:** Merged signal (red and green). Green - **ab229025** observed at 66-70 kDa. Red - loading control **ab8245** observed at 37 kDa.

**ab229025** Recombinant Anti-Lamin B1 antibody [EPR22165-121] was shown to specifically react with LMNB1 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line **ab255404** (knockout cell lysate ab263825) was used. Wild-type and LMNB1 knockout samples were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. **ab229025** 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 LMNB1 (Lamin B1) knockout HeLa cell lysate (ab263825)

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

**Lane 2:** LMNB1 knockout HeLa cell lysate (20µg)

**Lanes 1- 2:** Merged signal (red and green). Green - **ab133741** observed at 66-70 kDa. Red - loading control **ab8245** observed at 37 kDa.

**ab133741** Recombinant Anti-Lamin B1 antibody [EPR8985(B)] was shown to specifically react with LMNB1 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line **ab255404** (knockout cell lysate ab263825) was used. Wild-type and LMNB1 knockout samples were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. **ab133741** 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.

```
Mut  AGCTCAATGACCGGCTGGCGGTGTACAT--ACAAGTGGCAGCCTGGAGACGGAGAACA
      |||
WT   AGCTCAATGACCGGCTGGCGGTGTACATCGACAAGTGGCAGCCTGGAGACGGAGAACA
```

Allele-1: 2 bp deletion in exon 1

Sanger Sequencing - Human LMNB1 knockout HeLa cell lysate (ab263825)

```
Mut  AGCTCAATGACCGGCTGGCGGTGTACATACCGACAAGTGGCAGCCTGGAGACGGAGAA
      |||
WT   AGCTCAATGACCGGCTGGCGGTGTACATCGACAAGTGGCAGCCTGGAGACGGAGAA
```

Allele-2: 2 bp insertion in exon 1

Sanger Sequencing - Human LMNB1 knockout HeLa cell lysate (ab263825)

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