

## Product datasheet

# Human Lamin B1 ELISA Kit ab252351

Recombinant SimpleStep ELISA

[1 References](#) [4 Images](#)

### Overview

**Product name** Human Lamin B1 ELISA Kit

**Detection method** Colorimetric

#### Precision

Intra-assay

Sample	n	Mean	SD	CV%
extract	8			8.6%

Inter-assay

Sample	n	Mean	SD	CV%
extract	3			6.9%

**Sample type** Cell culture extracts, Tissue Extracts

**Assay type** Sandwich (quantitative)

**Sensitivity** 65 pg/ml

**Range** 0.31 ng/ml - 20 ng/ml

#### Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture extracts	113	102% - 124%
Tissue Extracts	98	94% - 102%

**Assay time** 1h 30m

**Assay duration** One step assay

**Species reactivity** **Reacts with:** Human

#### Product overview

Human Lamin B1 ELISA Kit (ab252351) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Lamin B1 protein in cell culture extracts and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Lamin B1 with 65 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

**Notes** 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.

**Platform** Pre-coated microplate (12 x 8 well strips)

## Properties

**Storage instructions** Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human Lamin-B1 Capture Antibody	1 x 600µl
10X Human Lamin-B1 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 5BI	1 x 6ml
Human Lamin-B1 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

## 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.

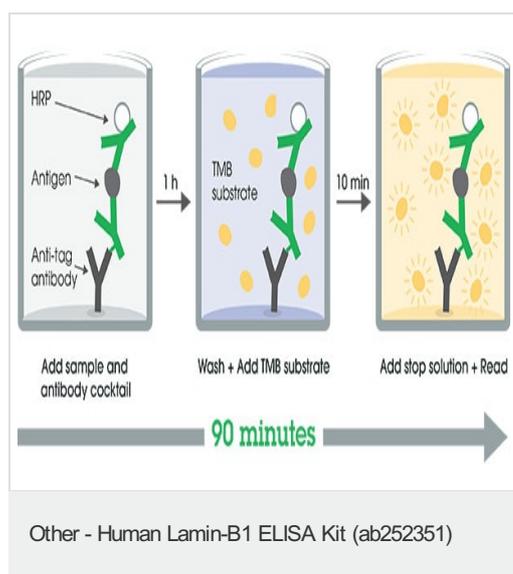
## Post-translational modifications

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.

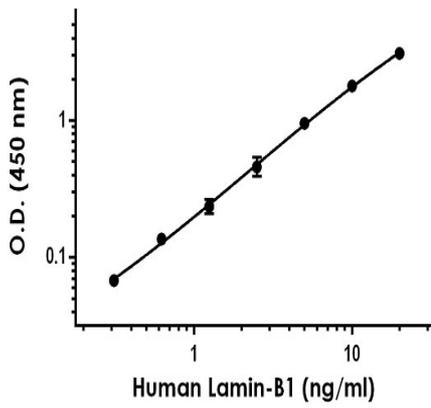
## Cellular localization

Nucleus inner membrane.

## Images

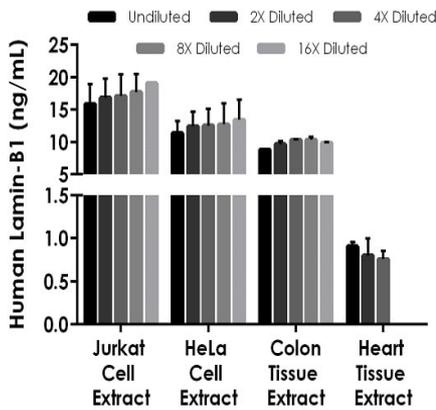


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



Example of human Lamin-B1 standard curve in 1X Cell Extraction Buffer PTR.

The Lamin-B1 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of native Lamin-B1 in human Jurkat cell extract, HeLa cell extract, colon tissue extract, and heart tissue extract.

The concentrations of Lamin-B1 were measured in duplicate and interpolated from the Lamin-B1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Lamin-B1 concentration was determined to be 17.32 ng/mL in Jurkat cell extract, 12.47 ng/mL in HeLa cell extract, 9.796 ng/mL colon tissue extract, and 0.821 ng/mL in heart tissue extract.

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- Research with confidence**  
Consistent and reproducible results
- Long-term and scalable supply**  
Recombinant technology
- Success from the first experiment**  
Confirmed specificity
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To learn more about the advantages of recombinant antibodies see [here](#).

Sandwich ELISA - Human Lamin B1 ELISA Kit (ab252351)

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