

## Product datasheet

### Mouse CD137 ELISA Kit ab205577

Recombinant SimpleStep ELISA<sup>®</sup>

[7 Images](#)

#### Overview

**Product name** Mouse CD137 ELISA Kit

**Detection method** Colorimetric

#### Precision

Intra-assay

Sample	n	Mean	SD	CV%
supernatant	5			3.9%

Inter-assay

Sample	n	Mean	SD	CV%
supernatant	3			4.8%

**Sample type**

Cell culture supernatant, Serum, Plasma, Cell culture extracts, Tissue Extracts

**Assay type**

Sandwich (quantitative)

**Sensitivity**

14 pg/ml

**Range**

78.125 pg/ml - 5000 pg/ml

#### Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	108.8	99.9% - 114.3%
Cell culture media	94.5	88.4% - 103.7%
EDTA Plasma	106.3	103.5% - 110.1%
Cit plasma	120.5	116.6% - 124.1%

**Assay time**

1h 30m

**Assay duration**

One step assay

**Species reactivity**

**Reacts with:** Mouse

**Does not react with:** Goat, Cow, Pig

## Product overview

Mouse CD137 ELISA Kit (ab205577) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of CD137 protein in cell culture extracts, cell culture supernatant, plasma, serum, and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse CD137 with 14 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

CD137 (also known as 4-1BB and Tumor necrosis factor receptor superfamily member 9 (TNRSF9)), a member of tumor necrosis factor receptor family, is a plasma membrane receptor for TNFSF9/4-1BBL. CD137 is expressed on the surface of activated T lymphocytes. CD137 is principally a homodimer, but also found as a monomer. CD137 generates either co-stimulatory signals leading to T cell activation and proliferation, or death signals, and may promote tumor rejection in vivo. Soluble forms of CD137 exist, these are generated by proteolytic cleavage or alternative splicing. In the years, functional expression of CD137 was noted on several non-T cells including monocytes, neutrophils, macrophages, B cells and natural killer (NK) cells.

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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.

## 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 Mouse CD137 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Mouse CD137 Lyophilized Recombinant Protein	2 vials
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml

Components	1 x 96 tests
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 5BR	1 x 6ml
Mouse CD137 Capture Antibody (lyophilized)	1 vial
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

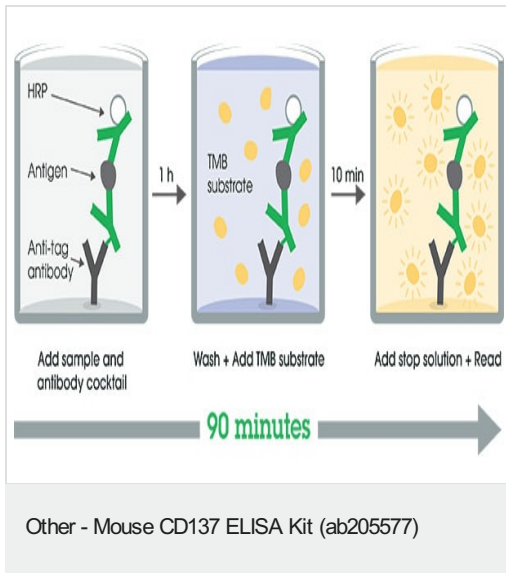
**Function** Receptor for TNFSF14/4-1BBL. Possibly active during T cell activation.

**Tissue specificity** Expressed on the surface of activated T-cells.

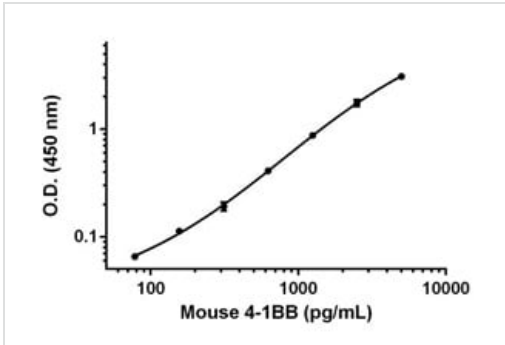
**Sequence similarities** Contains 4 TNFR-Cys repeats.

**Cellular localization** Membrane.

## Images

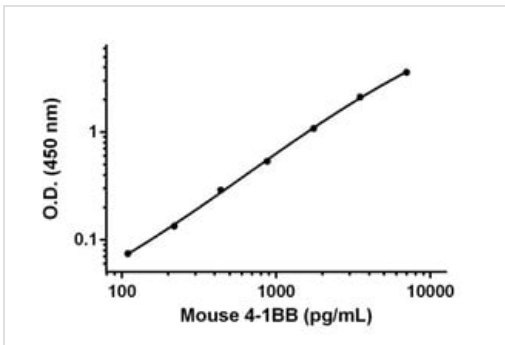


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



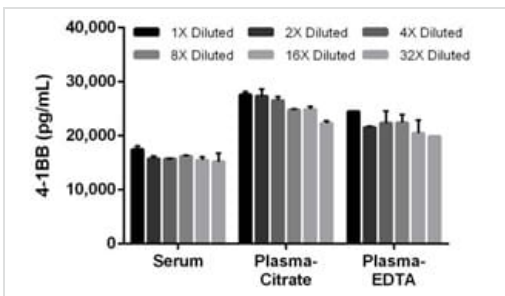
Example of CD137 standard curve in Sample Diluent NS.

Background-subtracted data values (mean +/- SD) are graphed.



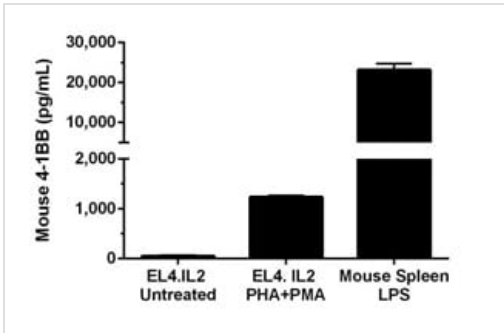
Example of CD137 standard curve in 1X Cell Extraction Buffer PTR.

Background-subtracted data values (mean +/- SD) are graphed.



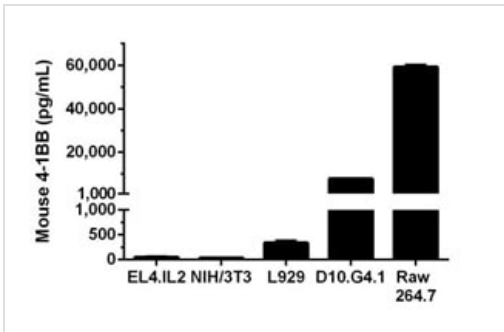
Interpolated concentrations of CD137 in mouse serum, plasma and cell culture supernatant samples.

The concentrations of CD137 were measured in duplicates, interpolated from the CD137 standard curves and corrected for sample dilution. Note that 1X Diluted serum and plasma samples were pre-diluted to 20%. Note that 1X Diluted Raw 264.7 day 3 cell culture supernatant samples were pre-diluted to 10%. The interpolated, dilution factor-corrected values are plotted in pg of CD137 per mL of neat sample (mean +/- SD, n=2).



Concentrations of CD137 in various untreated and treated cell culture supernatant samples.

EL4.IL2 cells were serum starved for 24 hours and then cultured in the absence or presence of 1.5% PHA and 10 ng/mL PMA for 48 hours. Mouse spleen cells were cultured in the presence of 5 µg/mL LPS for 6 days. The cell culture supernatants were prepared. The concentrations of CD137 were measured in the diluted cell culture supernatant samples in duplicates, interpolated from the CD137 standard curve and corrected for sample dilution. Note that EL4.IL2 cell culture supernatant samples were analyzed neat, 2X and 4X diluted. Note that mouse spleen cell culture supernatant samples were analyzed 4X, 8X and 16X diluted. The interpolated, dilution factor-corrected values are plotted in pg of CD137 per mL of neat supernatant (mean +/- SD, n=3).



Concentrations of 4-1BB in various cell culture supernatant samples.

EL4.IL2 cells were cultured in the absence of serum for 3 days. NIH3T3, L929, D10G4.1 and Raw 264.7 cells were cultured in the presence of serum for 3 days. The cell culture supernatants were prepared. The concentrations of CD137 were measured in the diluted cell culture supernatant samples in duplicates, interpolated from the 4-1BB standard curve and corrected for sample dilution. Note that EL4.IL2 cell culture supernatant samples were analyzed neat and 2X diluted. Note that NIH/3T3 cell culture supernatant samples were analyzed neat. Note that L929 cell culture supernatant samples were analyzed neat, 2X and 4X diluted. Note that D10G4.1 cell culture supernatant samples were analyzed 2X, 4X and 8X diluted. Note that Raw 264.7 cell culture supernatant samples were analyzed 10X, 20X and 40X diluted. The interpolated, dilution factor-corrected values are plotted in pg of CD137 per mL of neat supernatant (mean +/- SD, n=1-3).

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Sandwich ELISA - Mouse CD137 ELISA Kit  
(ab205577)

To learn more about the advantages of recombinant antibodies see [here](#).

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