

Product datasheet

Mouse Beta-2-Microglobulin ELISA Kit ab223590

SimpleStep ELISA[®]

★★★★☆ 1 Abreviews 4 Images

Overview

Product name Mouse Beta-2-Microglobulin ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	5			2.8%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			3.2%

Sample type Cell culture supernatant, Urine, Serum, Hep Plasma, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 1.165 pg/ml

Range 3.125 pg/ml - 200 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	114	110% - 118%
Urine	98	95% - 100%
Serum	102	97% - 106%
Hep Plasma	93	82% - 103%
EDTA Plasma	103	101% - 107%
Cit plasma	102	101% - 103%

Assay time	1h 30m
Assay duration	One step assay
Species reactivity	Reacts with: Mouse
Product overview	Beta-2-Microglobulin <i>in vitro</i> SimpleStep ELISA® (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Beta-2-Microglobulin protein in mouse serum, plasma, urine and cell culture supernatant samples.

The SimpleStep ELISA® employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

Beta-2-Microglobulin is the light chain of the class I major histocompatibility complex (MHC); it forms heterodimers with classical (HLA-A, -B, -C) and non-classical (HLA-E, -F, -G) class I MHC heavy chains and with class I non-MHC heavy chains (CD1). Beta-2-Microglobulin is involved in the presentation of peptide antigens to the immune system. Beta-2-Microglobulin can dissociate from the MHC and circulate in complex with alpha 2-Macroglobulin.

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

Properties

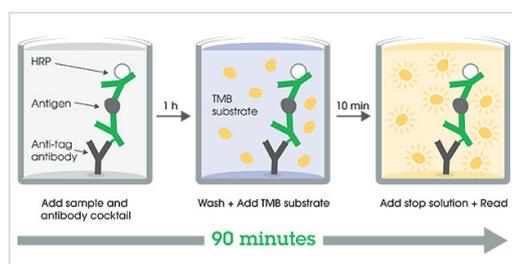
Storage instructions	Store at +4°C. Please refer to protocols.
-----------------------------	---

Components	1 x 96 tests
10X 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 5BR	1 x 6ml
Denaturant	1 x 500µl
10X Mouse Beta-2-Microglobulin Capture Antibody	1 x 600µl
10X Mouse Beta-2-Microglobulin Detector Antibody	1 x 600µl
Mouse Beta-2-Microglobulin Lyophilized Recombinant Protein	1 x 2 vials
Plate Seals	1 unit

Components	1 x 96 tests
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

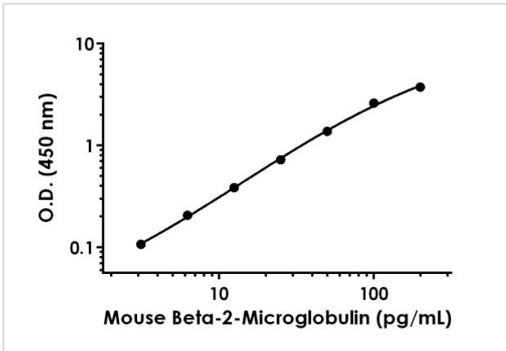
Function	Component of the class I major histocompatibility complex (MHC). Involved in the presentation of peptide antigens to the immune system.
Involvement in disease	Defects in B2M are the cause of hypercatabolic hypoproteinemia (HYCATHYP) [MIM:241600]. Affected individuals show marked reduction in serum concentrations of immunoglobulin and albumin, probably due to rapid degradation. Note=Beta-2-microglobulin may adopt the fibrillar configuration of amyloid in certain pathologic states. The capacity to assemble into amyloid fibrils is concentration dependent. Persistently high beta(2)-microglobulin serum levels lead to amyloidosis in patients on long-term hemodialysis.
Sequence similarities	Belongs to the beta-2-microglobulin family. Contains 1 Ig-like C1-type (immunoglobulin-like) domain.
Post-translational modifications	Glycation of Ile-21 is observed in long-term hemodialysis patients.
Cellular localization	Secreted. Detected in serum and urine.

Images



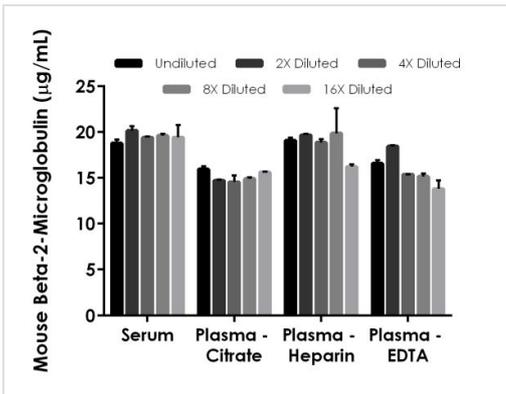
Other - Mouse Beta-2-Microglobulin ELISA Kit
([ab223590](#))

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.



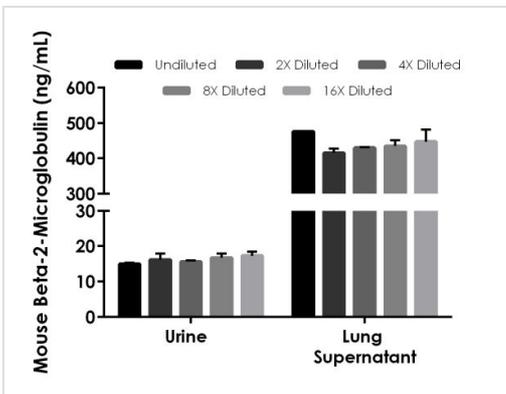
Example of mouse Beta-2-Microglobulin standard curve in Sample Diluent NS + Enhancer

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



Interpolated concentrations of native Beta-2-Microglobulin in mouse serum, and plasma samples

The concentrations of Beta-2-Microglobulin were measured in duplicates, interpolated from the Beta-2-Microglobulin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:100,000, plasma (citrate) 1:100,000, plasma (heparin) 1:100,000, and plasma (EDTA) 1:100,000. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Beta-2-Microglobulin concentration was determined to be 19.48 µg/mL in neat serum, 15.15 µg/mL in neat plasma (citrate), 18.74 µg/mL in neat plasma (heparin), and 15.87 µg/mL in neat plasma (EDTA).



Interpolated concentrations of native Beta-2-Microglobulin in mouse urine and lung tissue culture supernatant samples

The concentrations of Beta-2-Microglobulin were measured in duplicates, interpolated from the Beta-2-Microglobulin standard curves and corrected for sample dilution. Undiluted samples are as follows: urine 1:100, lung supernatant 1:5,000. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Beta-2-Microglobulin concentration was determined to be 16.12 ng/mL in neat urine, 440.7 ng/mL in neat lung tissue culture supernatant.

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet

- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors