

### Human Myoglobin ELISA Kit ab171580

Recombinant SimpleStep ELISA

[3 References](#) [7 Images](#)

#### Overview

**Product name** Human Myoglobin ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
homogenate	5			2%

Inter-assay

Sample	n	Mean	SD	CV%
homogenate	3			2%

**Sample type**

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

**Assay type**

Sandwich (quantitative)

**Sensitivity**

270 pg/ml

**Range**

1.25 ng/ml - 80 ng/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Urine	75	67% - 81%
Serum	103	83% - 115%
Tissue Extracts	111	105% - 118%
Cell culture media	101	81% - 113%
Hep Plasma	89	86% - 92%
EDTA Plasma	98	90% - 110%

Sample type	Average %	Range
Cit plasma	99	82% - 108%

**Assay time**

1h 30m

**Assay duration**

One step assay

**Species reactivity**

**Reacts with:** Human

**Product overview**

Human Myoglobin ELISA kit (ab171580) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Myoglobin protein in human serum, plasma, urine, cell culture supernatant, cell and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate human myoglobin with 270 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**

Myoglobin, a heme protein is found in both cardiac and skeletal muscle and functions as a reserve supply of oxygen by facilitating the movement of oxygen within muscles. Damage to either type of muscle following conditions such as trauma, ischemia, and diseases that cause myopathy, is associated with the release of myoglobin into serum. Specifically, following cardiac necrosis associated with myocardial infarction (MI), myoglobin is one of the first markers to rise above normal levels. Myoglobin levels increase measurably above baseline within 2-4 hours post-infarct, peaking at 9-12 hours, and returning to baseline within 24-36 hours.

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**

Microplate

**Properties**

**Storage instructions**

Store at +4°C. Please refer to protocols.

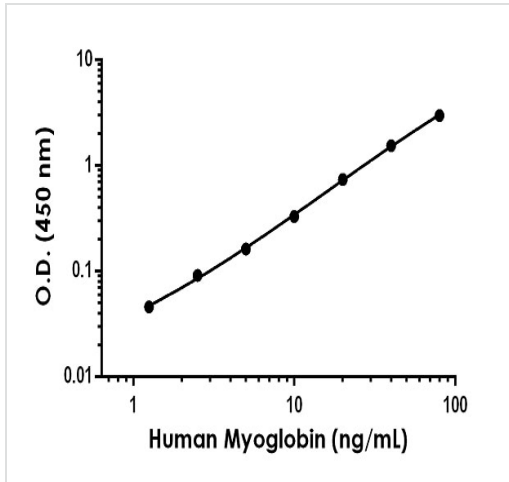
Components	1 x 96 tests
10X Human Myoglobin Capture Antibody	1 x 600µl

Components	1 x 96 tests
10X Human Myoglobin Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BI	1 x 6ml
Human Myoglobin 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** Serves as a reserve supply of oxygen and facilitates the movement of oxygen within muscles.

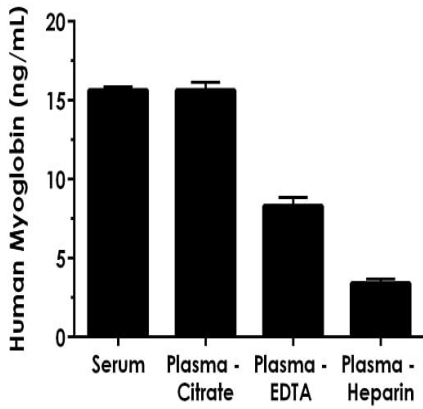
**Sequence similarities** Belongs to the globin family.

### Images



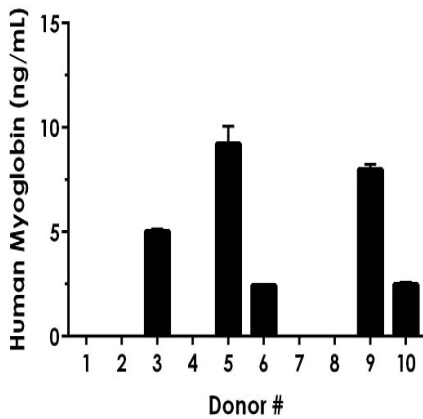
The Myoglobin standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Example of human Myoglobin standard curve in Sample Diluent NS.



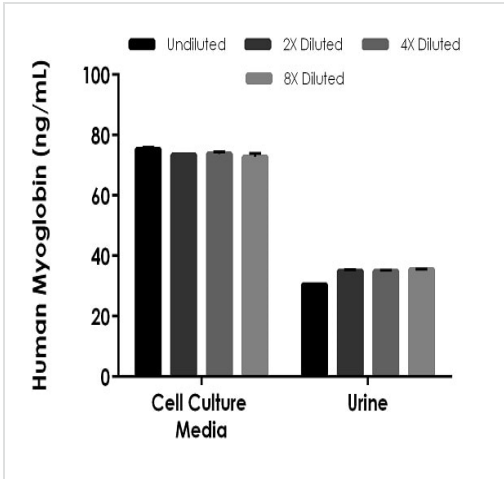
Interpolated concentrations of native Myoglobin in human serum and plasma samples.

The concentrations of Myoglobin were measured in duplicates, interpolated from the Myoglobin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 25%, plasma (heparin) 25%, plasma (citrate) 25%, plasma (EDTA) 25%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). The mean Myoglobin concentration was determined to be 15.8 ng/mL in serum, 15.6 ng/mL in plasma (citrate), 8.3 ng/mL in plasma (EDTA) and 3.4 ng/mL in plasma (heparin).



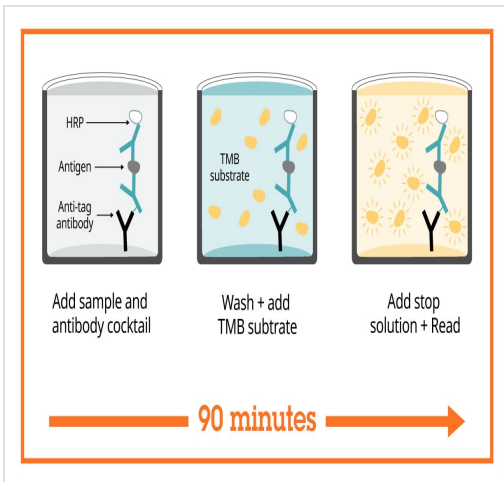
Serum from ten individual healthy human female donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). 5 of 10 donors were below the detectable dose. The mean Myoglobin concentration was determined to be 5.4 ng/mL with a range of ND – 9.8 ng/mL.



Interpolated concentrations of spike Myoglobin in human cell culture media and urine samples.

The concentrations of Myoglobin were measured in duplicates, interpolated from the Myoglobin standard curves and corrected for sample dilution. Undiluted samples are as follows: cell culture media 25% and urine 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



Sandwich ELISA - Human Myoglobin ELISA Kit (ab171580)

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.

Powered by  
recombinant antibodies



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Sandwich ELISA - Human Myoglobin ELISA Kit  
(ab171580)

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

**Get more done with SimpleStep ELISA**



**Easy to use**  
Single-wash 90-minute protocol



**Flexible**  
Matched antibody pairs available



**Precision antibodies**  
High sensitivity, specificity and reproducibility



**Scalable**  
Now in 10-pack and 384-well formats

Sandwich ELISA - Human Myoglobin ELISA Kit  
(ab171580)

To learn more about the advantages of SimpleStep ELISA<sup>®</sup> kits see [here](#).

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