

Human TREM-1 ELISA Kit ab270884

Recombinant SimpleStep ELISA<sup>®</sup>

7 Images

Overview

Product name	Human TREM-1 ELISA Kit				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Serum	8			5.1%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	Serum	4			7.8%
Sample type	Saliva, Serum, Cell culture media, Hep Plasma, EDTA Plasma, Cit plasma				
Assay type	Sandwich (quantitative)				
Sensitivity	7.1 pg/ml				
Range	31 pg/ml - 2000 pg/ml				
Recovery	Sample specific recovery				
	Sample type	Average %		Range	
	Saliva	110		106% - 110%	
	Serum	100		97% - 101%	
	Hep Plasma	95		95% - 96%	
	EDTA Plasma	90		88% - 94%	
	Cit plasma	92		86% - 96%	
Assay time	1h 30m				
Assay duration	One step assay				

## Species reactivity

**Reacts with:** Human

## Product overview

Human TREM-1 ELISA kit (ab270884) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of TREM-1 protein in human serum, plasmas, saliva, and cell culture supernatant. It uses our proprietary SimpleStep ELISA® technology. Quantitate human TREM-1 with 7.1 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

The triggering receptor expressed on myeloid cells (TREM), modulate the innate response either by amplifying or dampening Toll-Like Receptor (TLR) induced signals, and act to fine-tuning the inflammatory response. Trem-1 is a member of the TREM family of receptors encoded by a cluster of genes localized to the Human chromosome 6p21.1. The presence of TREM and TREM-like receptors are expressed on a variety of innate cells of the myeloid lineage including neutrophils, monocytes, macrophages, microglia, dendritic cells, among others. Soluble Trem-1 is thought to arise through the cleavage of the Trem-1 receptor by metalloproteinases, where it acts to negatively regulate TREM receptor signaling through neutralization of the respective ligands and minimize tissue damage due to prolonged inflammatory response.

## 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 TREM-1 Capture Antibody	1 x 600µl
10X Human TREM-1 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Human TREM-1 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit

Components	1 x 96 tests
Sample Diluent 25BS	1 x 20ml
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

Stimulates neutrophil and monocyte-mediated inflammatory responses. Triggers release of pro-inflammatory chemokines and cytokines, as well as increased surface expression of cell activation markers. Amplifier of inflammatory responses that are triggered by bacterial and fungal infections and is a crucial mediator of septic shock.

## Tissue specificity

Highly expressed in adult liver, lung and spleen than in corresponding fetal tissue. Also expressed in the lymph node, placenta, spinal cord and heart tissues. Expression is more elevated in peripheral blood leukocytes than in the bone marrow and in normal cells than malignant cells. Expressed at low levels in the early development of the hematopoietic system and in the promonocytic stage and at high levels in mature monocytes. Strongly expressed in acute inflammatory lesions caused by bacteria and fungi. Isoform 2 was detected in the lung, liver and mature monocytes.

## Sequence similarities

Contains 1 Ig-like V-type (immunoglobulin-like) domain.

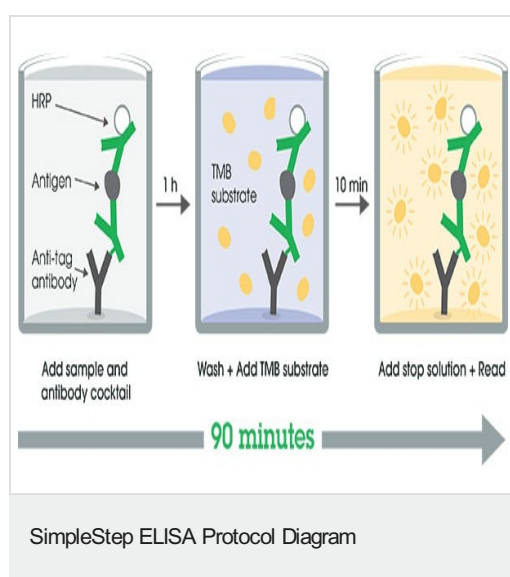
## Post-translational modifications

Glycosylated.

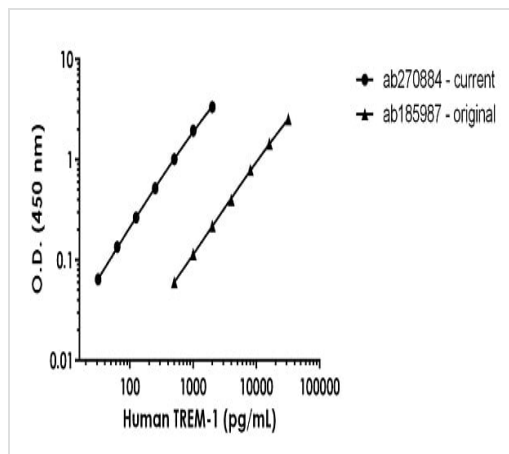
## Cellular localization

Secreted and Cell membrane.

## Images

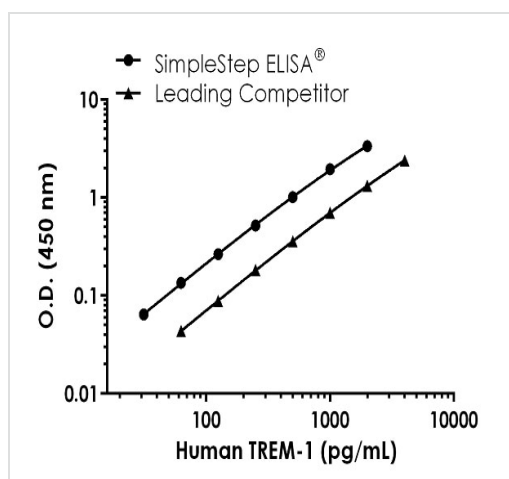


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



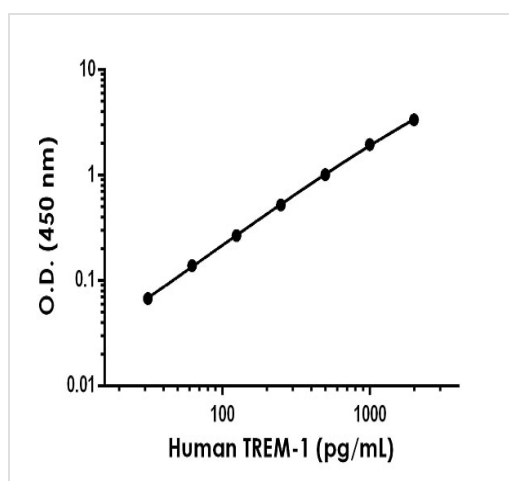
Human TREM-1 standard curve comparison

Standard Curve comparison between the original Human TREM-1 SimpleStep ELISA kit ([ab185987](#)) and current Human TREM-1 SimpleStep ELISA kit ([ab270884](#)).



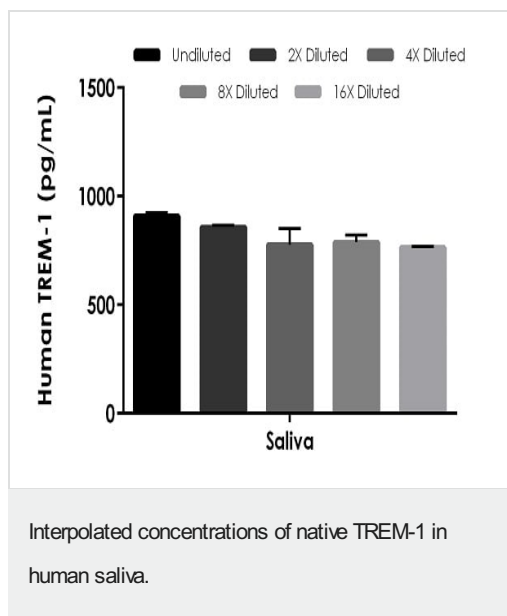
Human TREM-1 competitor curve comparison

Standard Curve comparison between Human TREM-1 SimpleStep ELISA kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows increased sensitivity.

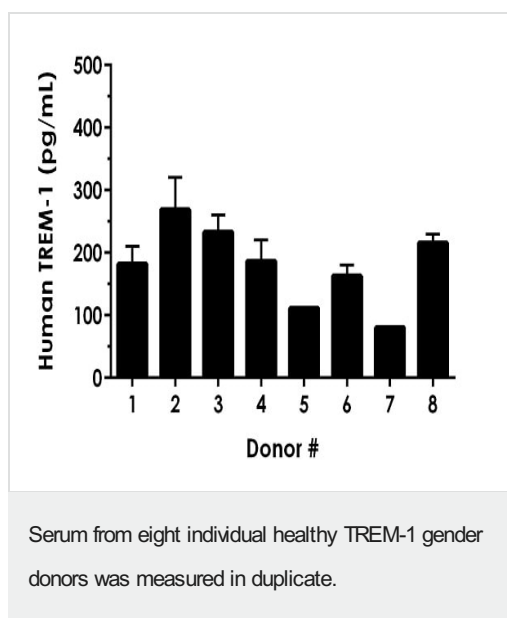


Example of human TREM-1 standard curve in Sample Diluent NS.

The TREM-1 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean  $\pm$  SD) are graphed.



The concentrations of TREM-1 were measured in duplicates, interpolated from the target standard curves and corrected for sample dilution. Undiluted samples are as follows: saliva 100%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). The mean target concentration was determined to be 820 pg/mL in saliva.



Interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). The mean TREM-1 concentration was determined to be 180 pg/mL with a range of 80 – 269 pg/mL.

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Consistent and reproducible results

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**Success from the first experiment**  
Confirmed specificity

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Animal-free production

Sandwich ELISA - Human TREM-1 ELISA Kit  
(ab270884)

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

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

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