abcam

Product datasheet

Human RANTES ELISA Kit (CCL5) ab174446

SimpleStep ELISA®

2 References   7 Images

Overview

Product name	Human RANTES ELISA Kit (CCL5)
Detection method	Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	8			5%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			2.8%

Sample type	Cell culture supernatant, Serum, Plasma, Heparin Plasma, EDTA Plasma, Citrate Plasma
Assay type	Sandwich (quantitative)
Sensitivity	0.091 pg/ml
Range	0.94 pg/ml - 60 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	104	95% - 114%
Serum	107	77% - 132%
Heparin Plasma	91	79% - 100%
EDTA Plasma	105	81% - 119%
Citrate Plasma	105	82% - 124%

Assay time	1h 30m

Assay duration	One step assay
Species reactivity	**Reacts with:** Human
Product overview	Abcam's RANTES (CCL5) *in vitro* SimpleStep ELISA® (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of RANTES protein in human plasma, serum and cell culture supernatant.
	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.
Notes	RANTES (**R**egulated on **A**ctivation, **N**ormal **T** cell **E**xpressed and **S**ecreted) is a chemotactic cytokine for T cells, eosinophils, and basophils. RANTES also acts as a recruitment signal for leukocytes into inflammatory sites with the help of cyotokines (IL-2 and IFN-γ) released by CD8+ T cells. RANTES also activates and induces proliferation of natural-killer cells to form CHAK (CC-Chemokine-activated killer) cells. RANTES has also been identified to inhibit infection of HIV.
Tested applications	**Suitable for:** Sandwich ELISA
Platform	Microplate

Properties

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

Components	1 x 96 tests
10X RANTES Capture Antibody	1 x 600µl
10X RANTES Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent CPR	1 x 6ml
Plate Seals	1 unit
RANTES Human Lyophilized Recombinant Protein	1 x 2 vials
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	Chemoattractant for blood monocytes, memory T-helper cells and eosinophils. Causes the

release of histamine from basophils and activates eosinophils. Binds to CCR1, CCR3, CCR4 and CCR5. One of the major HIV-suppressive factors produced by CD8+ T-cells. Recombinant RANTES protein induces a dose-dependent inhibition of different strains of HIV-1, HIV-2, and simian immunodeficiency virus (SIV). The processed form RANTES(3-68) acts as a natural chemotaxis inhibitor and is a more potent inhibitor of HIV-1-infection. The second processed form RANTES(4-68) exhibits reduced chemotactic and HIV-suppressive activity compared with RANTES(1-68) and RANTES(3-68) and is generated by an unidentified enzyme associated with monocytes and neutrophils.

Tissue specificity	T-cell and macrophage specific.
Sequence similarities	Belongs to the intercrine beta (chemokine CC) family.
Post-translational modifications	N-terminal processed form RANTES(3-68) is produced by proteolytic cleavage, probably by DPP4, after secretion from peripheral blood leukocytes and cultured sarcoma cells. The identity of the O-linked saccharides at Ser-27 and Ser-28 are not reported in PubMed:1380064. They are assigned by similarity.
Cellular localization	Secreted.

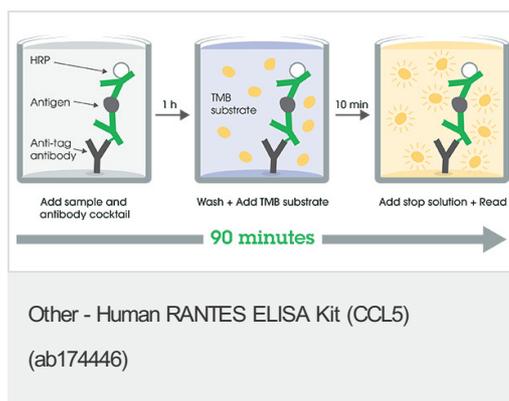## Applications

Our Abpromise guarantee covers the use of **ab174446** in the following tested applications.
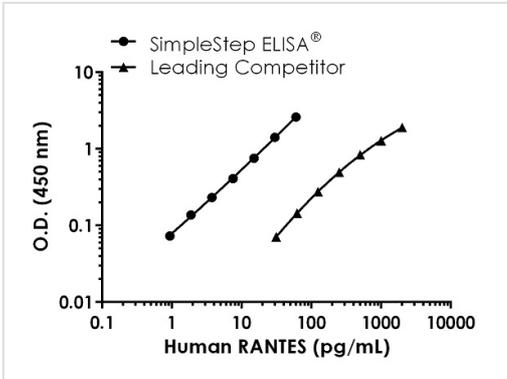
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

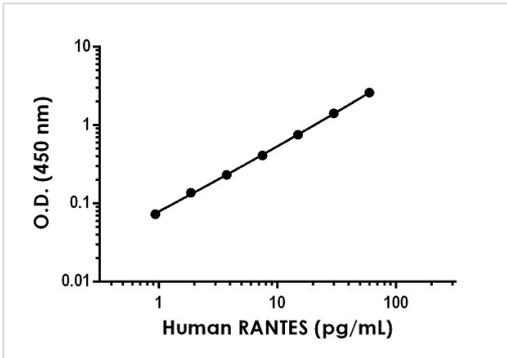| Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration.

Images
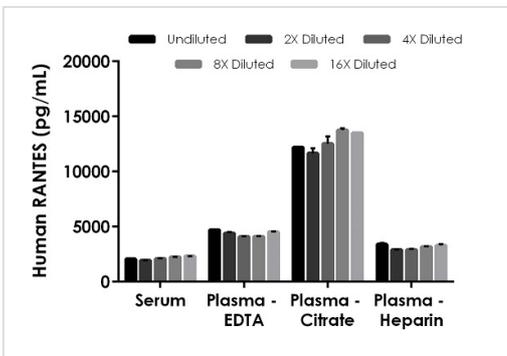

Other - Human RANTES ELISA Kit (CCL5)
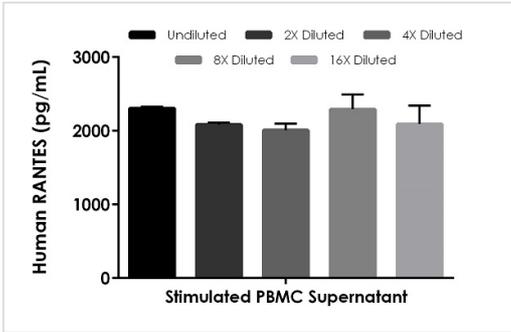(ab174446)

ELISA Protocol Summary

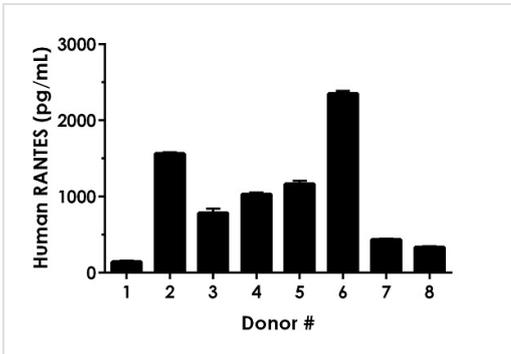Human RANTES standard curve comparison.

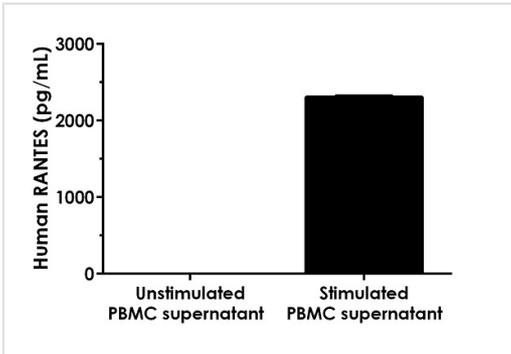Example of human RANTES standard curve in
Sample Diluent NS.

Interpolated concentrations of native RANTES in
human serum, and plasma samples.

Interpolated concentrations of native RANTES in human PBMC cell culture supernatant stimulated with 1.5% PHA-M for 36 hours.

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

Comparison of PHA-M stimulated versus unstimulated PBMC supernatant.

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