

Rat ST2 ELISA Kit (IL1RL1) ab255716

Recombinant SimpleStep ELISA[®]

4 Images

Overview

Product name	Rat ST2 ELISA Kit (IL1RL1)				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Serum	8			3%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	Serum	3			7%
Sample type	Serum, Hep Plasma, EDTA Plasma, Cit plasma				
Assay type	Sandwich (quantitative)				
Sensitivity	5.36 pg/ml				
Range	70.31 pg/ml - 4500 pg/ml				
Recovery	Sample specific recovery				
	Sample type	Average %		Range	
	Serum	82		81% - 83%	
	Hep Plasma	88		83% - 94%	
	EDTA Plasma	90		81% - 102%	
	Cit plasma	90		81% - 95%	
Assay time	1h 30m				
Assay duration	One step assay				
Species reactivity	Reacts with: Rat				

Does not react with: Cow

Product overview

Rat ST2 ELISA Kit (IL1RL1) (ab255716) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of ST2 (IL1RL1) protein in cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Rat ST2 (IL1RL1) with 5.36 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

ST2, also known as or Interleukin 1 receptor-like 1 (IL-1RL1), is a protein encoded by the IL1RL1 gene, a member of the interleukin 1 receptor family, specifically the receptor for interleukin-33. IL-33 binding to ST2 induces MYD88, IRAK1, IRAK4, and TRAF6 recruitment and subsequent phosphorylation of MAPK3/ERK1 and/or MAPK1/ERK2, MAPK14, and MAPK8. Studies of the homologous gene in mouse reported protein induction by pro-inflammatory stimuli with involvement in the function of helper T cells. ST2 is necessary for endotoxin tolerance by inhibiting TLR responses inducing the Th2 response. Rat ST2 shares 80.1%, 63.3%, 52.9%, and 61.6% sequence homology with mouse, human, bovine, and monkey, respectively.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions

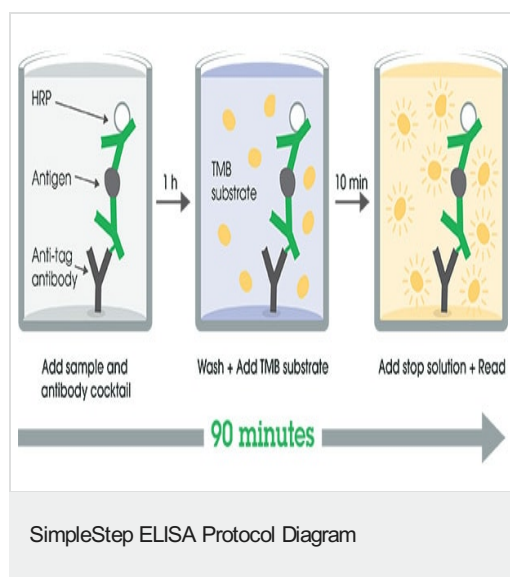
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Rat ST2 (IL1RL1) Capture Antibody	1 x 600µl
10X Rat ST2 (IL1RL1) Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BR	1 x 6ml
Plate Seals	1 unit
Rat ST2 (IL1RL1) Lyophilized Recombinant Protein	2 vials
Sample Diluent NS (ab193972)	1 x 12ml

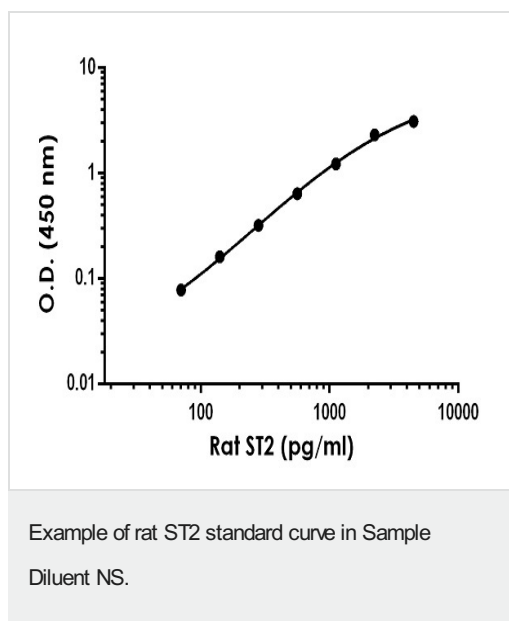
Components	1 x 96 tests
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function	Receptor for interleukin-33 (IL-33), its stimulation recruits MYD88, IRAK1, IRAK4, and TRAF6, followed by phosphorylation of MAPK3/ERK1 and/or MAPK1/ERK2, MAPK14, and MAPK8. Possibly involved in helper T-cell function.
Tissue specificity	Highly expressed in kidney, lung, placenta, stomach, skeletal muscle, colon and small intestine. Isoform A is prevalently expressed in the lung, testis, placenta, stomach and colon. Isoform B is more abundant in the brain, kidney and the liver. Isoform C is not detected in brain, heart, liver, kidney and skeletal muscle.
Sequence similarities	Belongs to the interleukin-1 receptor family. Contains 3 Ig-like C2-type (immunoglobulin-like) domains. Contains 1 TIR domain.
Cellular localization	Secreted and Cell membrane.

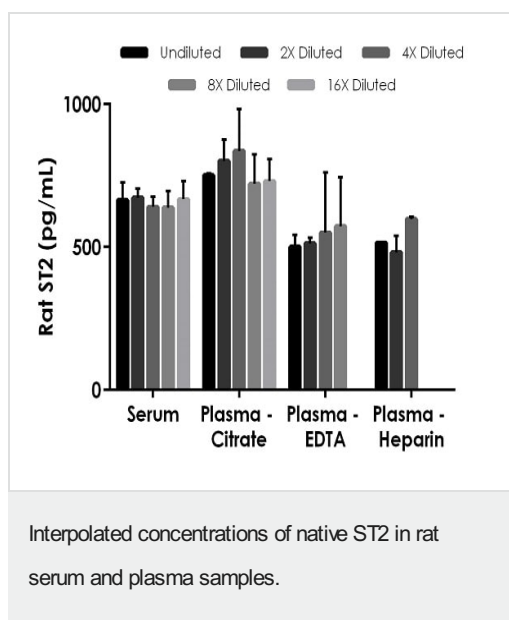
Images



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.



The ST2 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 ST2 were measured in duplicates, interpolated from the ST2 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 100%, plasma (citrate) 100%, plasma (EDTA) 50% and plasma (heparin) 100%. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean ST2 concentration was determined to be 656.39 pg/mL in serum, 767.97 pg/mL in plasma (citrate), 534.46 pg/mL in plasma (EDTA), and 531.74 pg/mL in plasma (heparin).

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Sandwich ELISA - Rat ST2 ELISA Kit (IL1RL1)
(ab255716)

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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