abcam

Product datasheet

Human PAR1/Thrombin Receptor ELISA Kit ab283544

Recombinant SimpleStep ELISA

5 Images

Overview

Product name Human PAR1/Thrombin Receptor ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
serum	8			2.6%

Inter-assay

Sample	n	Mean	SD	CV%
serum	3			4.7%

Sample type Cell culture supernatant, Serum, Cell culture extracts, Hep Plasma, EDTA Plasma

Assay type Sandwich (quantitative)

Sensitivity 1.21 pg/ml

Range 3.125 pg/ml - 200 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	110	107% - 113%
Serum	113	106% - 116%
Hep Plasma	98	95% - 101%
EDTA Plasma	109	107% - 112%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Product overview

Human PAR1/Thrombin Receptor ELISA kit (**ab272199**) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Human PAR1/Thrombin Receptor protein in human serum, plasma, cell culture supernatant, and cell culture extract samples. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human PAR1/Thrombin Receptor with 1.21 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

Human PAR1/Thrombin Receptor also known as Protease-activated receptor 1 or coagulation factor II (thrombin) receptor is a protein that in humans is encoded by the F2R gene. Human PAR1 is a G protein-coupled receptor and one of four protease-activated receptors involved in the regulation of thrombotic response. Highly expressed in platelets and endothelial cells, human PAR1 plays a key role in mediating the interplay between coagulation and inflammation, which is important in the pathogenesis of inflammatory and fibrotic lung diseases. Human PAR1 is also involved both in disruption and maintenance of endothelial barrier integrity, through interaction with either thrombin or activated protein C, respectively.

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

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions

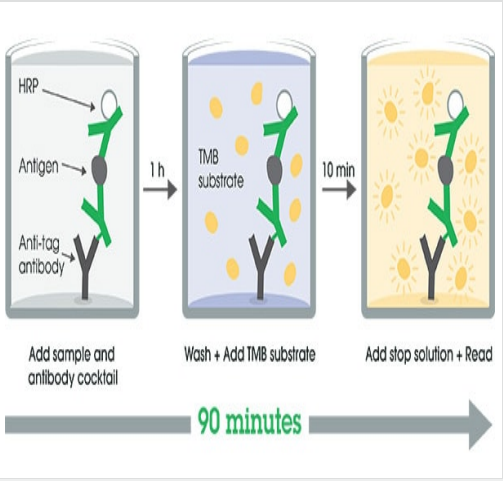
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Human PAR1/Thrombin Receptor Capture Antibody	1 x 600µl
10X Human PAR1/Thrombin Receptor Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml

Components	1 x 96 tests
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml
Human PAR1/Thrombin Receptor Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
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

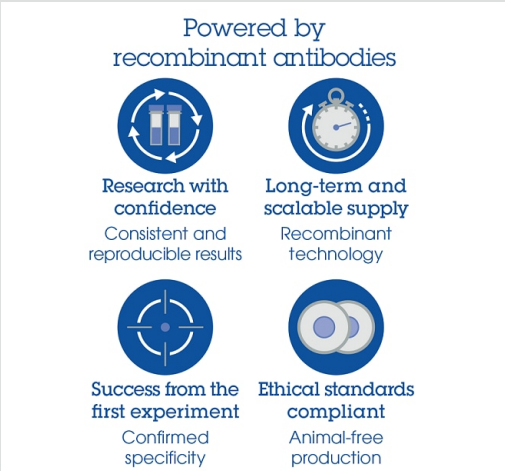
Function	High affinity receptor for activated thrombin coupled to G proteins that stimulate phosphoinositide hydrolysis. May play a role in platelets activation and in vascular development.
Tissue specificity	Platelets and vascular endothelial cells.
Sequence similarities	Belongs to the G-protein coupled receptor 1 family.
Post-translational modifications	A proteolytic cleavage generates a new N-terminus that functions as a tethered ligand. Phosphorylated; probably mediating desensitization prior to the uncoupling and internalization of the receptor.
Cellular localization	Cell membrane.

Images



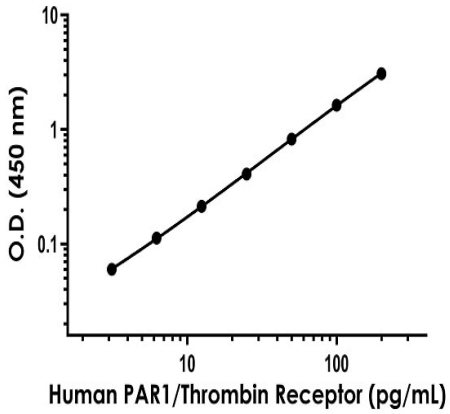
SimpleStep ELISA Protocol Diagram

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.



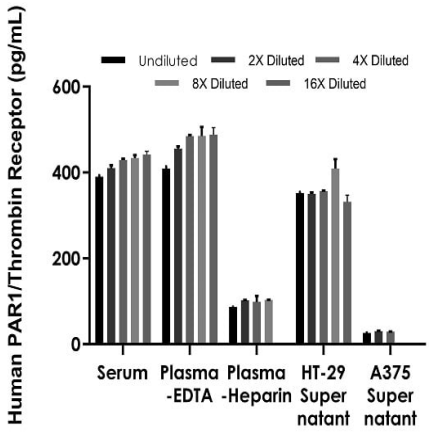
Recombinant Antibody Benefits

To learn more about the advantages of recombinant antibodies see **here**.



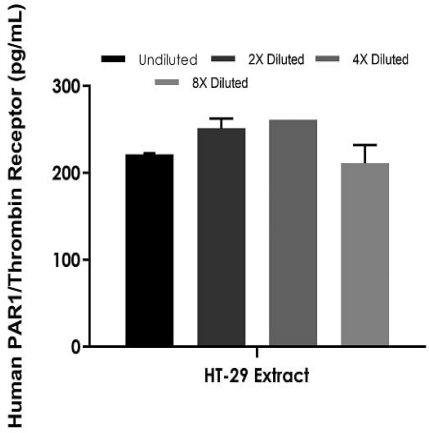
Example of human PAR1/Thrombin Receptor standard curve in Sample Diluent NS.

The PAR1/Thrombin Receptor 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.



Interpolated concentrations of native PAR1/Thrombin Receptor in human serum, plasma and cell culture supernatant samples.

The concentrations of PAR1/Thrombin Receptor were measured in duplicates, interpolated from the PAR1/Thrombin Receptor standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (EDTA) 50%, plasma (heparin) 100%, HT-29 supernatant 50%, and A375 supernatant 100%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PAR1/Thrombin Receptor concentration was determined to be 420.97 pg/mL in serum, 464.59 pg/mL in plasma (EDTA), 97.80 pg/mL in plasma (heparin), 360.01 pg/mL in HT-29 supernatant and 28.52 pg/mL in A375 supernatant.



Interpolated concentrations of native PAR1/Thrombin Receptor in human HT-29 cell extract based on a 100 µg/mL extract load.

The concentrations of PAR1/Thrombin Receptor were measured in duplicate and interpolated from the PAR1/Thrombin Receptor standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PAR1/Thrombin Receptor concentration was determined to be 236.37 pg/mL in HT-29 cell extract.

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