

Human Procalcitonin ELISA Kit ab221828

リコンビナント SimpleStep ELISA

★★★★★ 1 Abreviews 5 References 画像数 8

製品の概要

製品名	Human Procalcitonin ELISA Kit			
検出方法	Colorimetric			
再現性	Intra-Assay (同時再現性)			
	サンプル	N	平均値	SD
	Urine	8		CV%
				2.9%
	Inter-Assay (日差再現性)			
	サンプル	N	平均値	SD
	Urine	3		CV%
				4.4%
サンプルの種類	Cell culture supernatant, Saliva, Milk, Urine, Serum, Hep Plasma, EDTA Plasma, Cit plasma			
アッセイタイプ	Sandwich (quantitative)			
検出感度	1.51 pg/ml			
検出範囲	6.25 pg/ml - 400 pg/ml			
添加回収試験	特定サンプルでの回収試験			

サンプルの種類	平均 %	測定範囲
Saliva	94	84% - 104%
Milk	79	75% - 88%
Urine	90	88% - 92%
Serum	79	74% - 82%
Cell culture media	100	99% - 101%
Hep Plasma	93	90% - 100%

サンプルの種類	平均 %	測定範囲
EDTA Plasma	78	75% - 82%
Cit plasma	83	79% - 88%

全工程の試験時間

1h 30m

ステップ

One step assay

種交差性

交差種: Human

非交差種: Cow

製品の概要

Human Procalcitonin ELISA Kit (ab221828) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Procalcitonin protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, milk, saliva, serum, and urine. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Procalcitonin with 1.51 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.

特記事項

Human Procalcitonin is a 116-amino acid precursor protein of the peptide hormone called Calcitonin coded by the gene CALCA. Procalcitonin is mainly produced by the C-cells of the thyroid and certain endocrine cells of the lung. Under normal expression conditions, Procalcitonin is cleaved into three specific fragments: an N-terminal residue, Calcitonin, and Katacalcin. Levels of unprocessed Procalcitonin have been shown to rise significantly after bacterial infection, trauma, and shock. Calcitonin regulates the blood phosphate and calcium levels by promoting incorporation into bones. Populations with chronic kidney disease have been shown to have higher procalcitonin levels. The antibodies used in this product were raised to the propeptide sequence residues 26-82. The standard protein in this product has been mass calibrated to a full-length procalcitonin (residues 26-141).

試験プラットフォーム

Pre-coated microplate (12 x 8 well strips)

製品の特性

保存方法

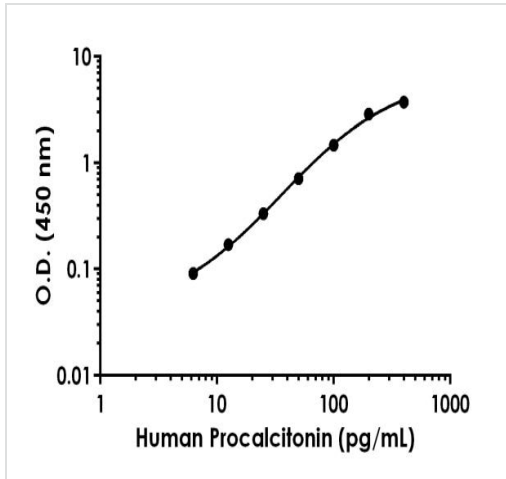
Store at +4°C. Please refer to protocols.

内容	1 x 96 tests
10X Human Procalcitonin Capture Antibody	1 x 600µl
10X Human Procalcitonin Detector Antibody	1 x 600µl
Human Procalcitonin Lyophilized Recombinant Protein	2 vials
Antibody Diluent 4BI	1 x 6ml
10X Wash Buffer PT (ab206977)	1 x 20ml
TMB Development Solution	1 x 12ml
Stop Solution	1 x 12ml
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Plate Seals	1 unit

**関連性** Procalcitonin (PCT) is a 116 amino acid residue peptide with molecular weight of about 13 kDa. PCT itself has no known hormonal activity. PCT belongs to a group of related proteins including calcitonin gene-related peptides I and II, amylin, adrenomodulin and calcitonin (CAPA peptide family). PCT, like other peptides of CAPA family, appears from the common precursor pre-procalcitonin consisting of 141 amino acids by removal of 25 amino acids from the N-terminus. PCT undergoes successive cleavages to form three molecules: N-terminal fragment (55 a.a.), calcitonin (32 a.a.) and katacalcin (21 a.a.). Under normal metabolic conditions, PCT is only present in the C cells of the thyroid gland. In bacterial infection and sepsis, however, intact PCT is found in the blood and, more importantly, its level is related to the severity of bacterial sepsis. Today, PCT is considered to be one of the earliest and most specific markers of sepsis.

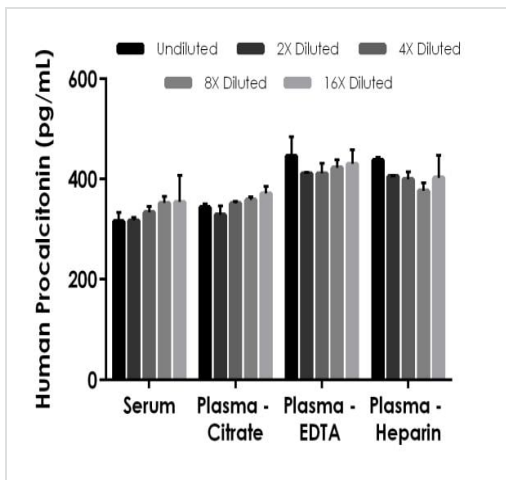
**細胞内局在** Secreted

**画像**



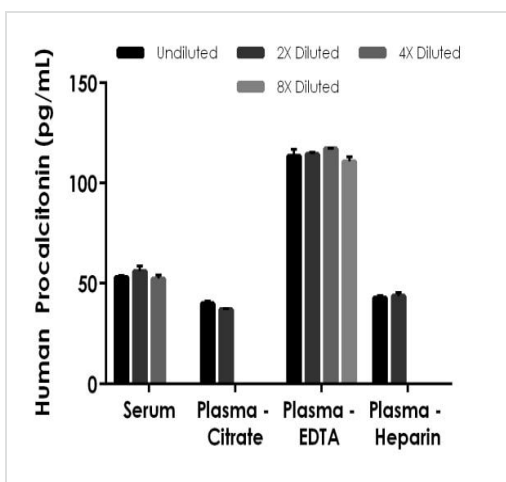
Example of human Procalcitonin standard curve.

Background-subtracted data values (mean  $\pm$  SD) are graphed.



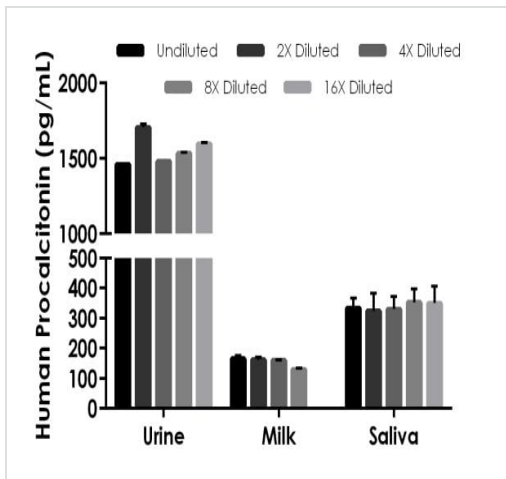
Interpolated concentrations of spiked Procalcitonin in human serum and plasma samples.

The concentrations of Procalcitonin were measured in duplicates, interpolated from the Procalcitonin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, plasma (EDTA) 50%, and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean Procalcitonin concentration was determined to be 335 pg/mL in neat serum, 351 pg/mL in neat plasma (citrate), 424 pg/mL in neat plasma (EDTA) and 405 pg/mL in neat plasma (heparin).



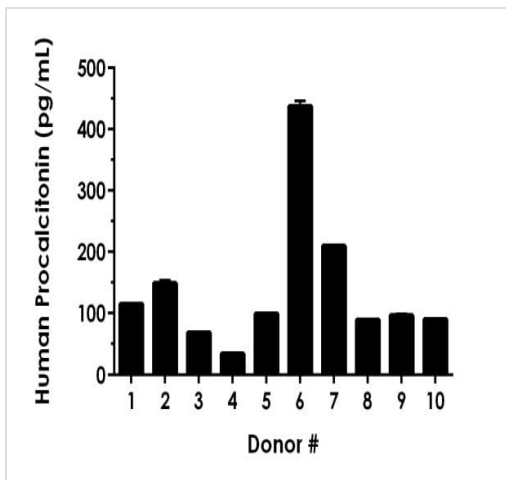
Interpolated concentrations of native Procalcitonin in human serum and plasma samples.

The concentrations of Procalcitonin were measured in duplicates, interpolated from the Procalcitonin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, plasma (EDTA) 50%, and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean Procalcitonin concentration was determined to be 54 pg/mL in neat serum, 38 pg/mL in neat plasma (citrate), 114 pg/mL in neat plasma (EDTA) and 43 pg/mL in neat plasma (heparin).



Interpolated concentrations of native Procalcitonin in human urine, milk, and spiked Procalcitonin in human saliva samples.

The concentrations of Procalcitonin were measured in duplicates, interpolated from the Procalcitonin standard curves and corrected for sample dilution. Undiluted samples are as follows: urine 25%, milk 50%, and saliva 50%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). The mean Procalcitonin concentration was determined to be 1,555 pg/mL in neat urine, 154 pg/mL in neat milk, and 338 pg/mL in neat saliva.



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

Interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). The mean Procalcitonin concentration in neat serum was determined to be 139 pg/mL with a range of 33 – 438 pg/mL.

Powered by  
recombinant antibodies



**Research with confidence**  
Consistent and reproducible results



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



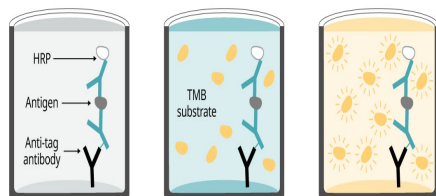
**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Sandwich ELISA - Human Procalcitonin ELISA Kit  
(ab221828)

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



Add sample and  
antibody cocktail

Wash + add  
TMB substrate

Add stop  
solution + Read

**90 minutes**

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.

Sandwich ELISA - Human Procalcitonin ELISA Kit  
(ab221828)

**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 Procalcitonin ELISA Kit  
(ab221828)

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

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

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