**Product datasheet**

**Human Protein C ELISA Kit ab137987**

### Overview

**Product name**  
Human Protein C ELISA Kit

**Detection method**  
Colorimetric

**Precision**

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intra-assay</td>
<td>= 4.8%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-assay</td>
<td>= 7.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sample type**  
Cell culture supernatant, Saliva, Milk, Urine

**Assay type**  
Sandwich (quantitative)

**Sensitivity**  
= 3 ng/ml

**Range**  
3.13 ng/ml - 200 ng/ml

**Recovery**  
= 98%

**Sample specific recovery**

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Average %</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saliva</td>
<td>94% - 99%</td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>94% - 98%</td>
<td></td>
</tr>
<tr>
<td>Urine</td>
<td>89% - 93%</td>
<td></td>
</tr>
</tbody>
</table>

**Assay time**  
4h 0m

**Assay duration**  
Multiple steps standard assay

**Species reactivity**  
Reacts with: Human

**Product overview**

Abcam’s Protein C Human in vitro ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Protein C in urine, saliva, milk, and cell culture supernatant.
A Protein C specific antibody has been precoated onto 96-well plates and blocked. Standards or test samples are added to the wells and subsequently a Protein C specific biotinylated detection antibody is added and then followed by washing with wash buffer. Streptavidin-Peroxidase Complex is added and unbound conjugates are washed away with wash buffer. TMB is then used to visualize Streptavidin-Peroxidase enzymatic reaction. TMB is catalyzed by Streptavidin-Peroxidase to produce a blue color product that changes into yellow after adding acidic stop solution. The density of yellow coloration is directly proportional to the amount of Protein C captured in plate.

**Tested applications**

**Suitable for:** Sandwich ELISA

**Platform**

Microplate

**Properties**

**Storage instructions**

Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>100X Streptavidin-Peroxidase Conjugate</td>
<td>1 x 80µl</td>
</tr>
<tr>
<td>10X Diluent N Concentrate</td>
<td>1 x 30ml</td>
</tr>
<tr>
<td>20X Wash Buffer Concentrate</td>
<td>2 x 30ml</td>
</tr>
<tr>
<td>50X Biotinylated Human Protein C Antibody (Lyophilized)</td>
<td>1 x 120µl</td>
</tr>
<tr>
<td>Chromogen Substrate</td>
<td>1 x 8ml</td>
</tr>
<tr>
<td>Protein C Microplate (12 x 8 well strips)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Protein C Standard</td>
<td>1 vial</td>
</tr>
<tr>
<td>Sealing Tapes</td>
<td>3 units</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 12ml</td>
</tr>
</tbody>
</table>

**Function**

Protein C is a vitamin K-dependent serine protease that regulates blood coagulation by inactivating factors Va and VIIIa in the presence of calcium ions and phospholipids.

**Tissue specificity**

Plasma; synthesized in the liver.

**Involvement in disease**

Defects in PROC are the cause of thrombophilia due to protein C deficiency, autosomal dominant (THPH3) [MIM:176860]. A hemostatic disorder characterized by impaired regulation of blood coagulation and a tendency to recurrent venous thrombosis. However, many adults with heterozygous disease may be asymptomatic. Individuals with decreased amounts of protein C are classically referred to as having type I protein C deficiency and those with normal amounts of a functionally defective protein as having type II deficiency.

Defects in PROC are the cause of thrombophilia due to protein C deficiency, autosomal recessive (THPH4) [MIM:612304]. A hemostatic disorder characterized by impaired regulation of blood coagulation and a tendency to recurrent venous thrombosis. It results in a thrombotic condition that can manifest as a severe neonatal disorder or as a milder disorder with late-onset thrombophilia. The severe form leads to neonatal death through massive neonatal venous thrombosis. Often associated with ecchymotic skin lesions which can turn necrotic called purpura...
fulminans, this disorder is very rare.

**Sequence similarities**
- Belongs to the peptidase S1 family.
- Contains 2 EGF-like domains.
- Contains 1 Gla (gamma-carboxy-glutamate) domain.
- Contains 1 peptidase S1 domain.

**Post-translational modifications**
- The vitamin K-dependent, enzymatic carboxylation of some Glu residues allows the modified protein to bind calcium.
- N- and O-glycosylated. Partial (70%) N-glycosylation of Asn-371 with an atypical N-X-C site produces a higher molecular weight form referred to as alpha. The lower molecular weight form, not N-glycosylated at Asn-371, is beta. O-glycosylated with core 1 or possibly core 8 glycans.
- The iron and 2-oxoglutarate dependent 3-hydroxylation of aspartate and asparagine is (R) stereospecific within EGF domains.
- May be phosphorylated on a Ser or Thr in a region (AA 25-30) of the propeptide.

**Applications**

Our **Abpromise guarantee** covers the use of **ab137987** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandwich ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

**Images**

Representative Standard Curve using ab137987

![Typical Standard Curve](image)

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• We investigate all quality concerns to ensure our products perform to the highest standards

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