Human IL-6 ELISA Kit High Sensitivity ab46042

**Overview**

**Product name**  
Human IL-6 ELISA Kit High Sensitivity

**Detection method**  
Colorimetric

**Precision**

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean (pg/ml)</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
<td>4.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean (pg/ml)</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample 1</td>
<td>18</td>
<td>25</td>
<td>3</td>
<td>12.2%</td>
</tr>
<tr>
<td>Sample 2</td>
<td>18</td>
<td>12</td>
<td>1</td>
<td>8.7%</td>
</tr>
<tr>
<td>Sample 3</td>
<td>18</td>
<td>6</td>
<td>1</td>
<td>13.7%</td>
</tr>
<tr>
<td>Sample 4</td>
<td>18</td>
<td>41</td>
<td>2</td>
<td>5.9%</td>
</tr>
<tr>
<td>Sample 5</td>
<td>18</td>
<td>31</td>
<td>1</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

**Sample type**  
Cell culture supernatant, Serum, Plasma, Other biological fluids

**Assay type**  
Sandwich (quantitative)

**Sensitivity**  
< 0.8 pg/ml

**Range**  
1.56 pg/ml - 50 pg/ml

**Recovery**  
93 %

**Assay time**  
3h 45m

**Assay duration**  
Multiple steps standard assay

**Species reactivity**  
Reacts with: Human

**Product overview**  
Human IL-6 ELISA kit - High sensitivity is designed for the quantitative measurement of IL-6 in supernatants, buffered solutions, serum, plasma and other body fluids. This assay will recognise both natural and recombinant Human IL-6.
A monoclonal antibody specific for IL-6 has been coated onto the wells of the microtiter strips provided. Samples, including standards of known IL-6 concentrations, control specimens or unknowns are pipetted into these wells. During the first incubation, the standards or samples and a biotinylated monoclonal antibody specific for IL-6 are simultaneously incubated. After washing, the enzyme Streptavidin-HRP, that binds the biotinylated antibody is added, incubated and washed. A TMB substrate solution is added which acts on the bound enzyme to induce a colored reaction product. The intensity of this colored product is directly proportional to the concentration of IL-6 present in the samples.

This kit will recognize both endogenous and recombinant Human IL-6.

Get results in 90 minutes with Human IL-6 ELISA Kit (ab178013) from our SimpleStep ELISA® range.

**Tested applications**

**Suitable for:** Sandwich ELISA

**Platform**

Microplate

**Properties**

**Storage instructions**

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>1 x 96 tests</th>
<th>2 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X Standard Diluent Buffer</td>
<td>Black</td>
<td>1 x 25ml</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>200X Wash Buffer</td>
<td>White</td>
<td>1 x 10ml</td>
<td>2 x 10ml</td>
</tr>
<tr>
<td>Biotinylated Antibody Diluent</td>
<td>Red</td>
<td>1 x 7.5ml</td>
<td>1 x 13ml</td>
</tr>
<tr>
<td>Biotinylated anti-IL-6</td>
<td>Red</td>
<td>1 x 0.4ml</td>
<td>2 x 0.4ml</td>
</tr>
<tr>
<td>Chromogen TMB Substrate Solution</td>
<td></td>
<td>1 x 11ml</td>
<td>1 x 24ml</td>
</tr>
<tr>
<td>HRP Diluent</td>
<td>Red</td>
<td>1 x 23ml</td>
<td>1 x 23ml</td>
</tr>
<tr>
<td>IL-6 HS Control</td>
<td>Silver</td>
<td>2 vials</td>
<td>4 vials</td>
</tr>
<tr>
<td>IL-6 Microplate (12 x 8 well strips)</td>
<td></td>
<td>1 unit</td>
<td>2 units</td>
</tr>
<tr>
<td>IL-6 HS Standard (Lyophilized)</td>
<td>Yellow</td>
<td>2 vials</td>
<td>4 vials</td>
</tr>
<tr>
<td>Plastic Plate Covers</td>
<td></td>
<td>1 x 2 units</td>
<td>1 x 4 units</td>
</tr>
<tr>
<td>Standard Diluent (Serum)</td>
<td></td>
<td>1 x 7ml</td>
<td>2 x 7ml</td>
</tr>
<tr>
<td>Stop Reagent</td>
<td>Black</td>
<td>1 x 11ml</td>
<td>2 x 11ml</td>
</tr>
<tr>
<td>Streptavidin-HRP</td>
<td></td>
<td>2 x 5µl</td>
<td>4 x 5µl</td>
</tr>
</tbody>
</table>

**Function**

Cytokine with a wide variety of biological functions. It is a potent inducer of the acute phase
response. Plays an essential role in the final differentiation of B-cells into Ig-secreting cells
Involved in lymphocyte and monocyte differentiation. It induces myeloma and plasmacytoma
growth and induces nerve cells differentiation. Acts on B-cells, T-cells, hepatocytes, hematopoietic
progenitor cells and cells of the CNS. Also acts as a myokine. It is discharged into the
bloodstream after muscle contraction and acts to increase the breakdown of fats and to improve
insulin resistance.

**Involvement in disease**
Genetic variations in IL6 are associated with susceptibility to rheumatoid arthritis systemic
juvenile (RASJ) [MIM:604302]. An inflammatory articular disorder with systemic-onset beginning
before the age of 16. It represents a subgroup of juvenile arthritis associated with severe
extraarticular features and occasionally fatal complications. During active phases of the disorder,
patients display a typical daily spiking fever, an evanescent macular rash, lymphadenopathy,
hepatosplenomegaly, serositis, myalgia and arthritis.

Note: A IL6 promoter polymorphism is associated with a lifetime risk of development of Kaposi
sarcoma in HIV-infected men.

**Sequence similarities**
Belongs to the IL-6 superfamily.

**Post-translational modifications**
N- and O-glycosylated.

**Cellular localization**
Secreted.

**Applications**
Our Abpromise guarantee covers the use of ab46042 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>Use at an assay dependent concentration.</td>
<td></td>
</tr>
</tbody>
</table>

**Images**

IL-6 was measured in cell culture medium from U937 control cells,
or cells stimulated with LPS (1 µg x mL⁻¹; 6 h) or PMA (10 ng x
mL⁻¹; 24 h) and LPS (background signal subtracted) (duplicates +/-
SD).
Representative Standard Curve using ab46042

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

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