Human VEGF ELISA Kit ab100662

Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Human VEGF ELISA Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Colorimetric</td>
</tr>
<tr>
<td>Sample type</td>
<td>Cell culture supernatant, Serum, Plasma</td>
</tr>
<tr>
<td>Assay type</td>
<td>Sandwich (quantitative)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>&lt; 10 pg/ml</td>
</tr>
<tr>
<td>Range</td>
<td>8.23 pg/ml - 6000 pg/ml</td>
</tr>
<tr>
<td>Recovery</td>
<td>&gt; 100 %</td>
</tr>
</tbody>
</table>

Sample specific recovery

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Average %</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell culture supernatant</td>
<td>103.5</td>
<td>92% - 113%</td>
</tr>
<tr>
<td>Serum</td>
<td>104.4</td>
<td>92% - 115%</td>
</tr>
<tr>
<td>Plasma</td>
<td>105.7</td>
<td>93% - 114%</td>
</tr>
</tbody>
</table>

Assay duration

Multiple steps standard assay

Species reactivity

Reacts with: Human

Product overview

Abcam’s VEGF Human ELISA (Enzyme-Linked Immunosorbent Assay) kit is an in vitro enzyme-linked immunosorbent assay for the quantitative measurement of Human VEGF in serum, plasma and cell culture supernatants.

This assay employs an antibody specific for Human VEGF coated on a 96-well plate. Standards and samples are pipetted into the wells and VEGF present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human VEGF antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of VEGF bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

Notes

Optimization may be required with urine samples.

Platform

Microplate
**Storage instructions**

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

**Function**

Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. Induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. Binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. NRP1/Neuropilin-1 binds isoforms VEGF-165 and VEGF-145. Isoform VEGF165B binds to KDR but does not activate downstream signaling pathways, does not activate angiogenesis and inhibits tumor growth.

**Tissue specificity**

Isoform VEGF189, isoform VEGF165 and isoform VEGF121 are widely expressed. Isoform VEGF206 and isoform VEGF145 are not widely expressed.

**Involvement in disease**

Defects in VEGFA are a cause of susceptibility to microvascular complications of diabetes type 1 (MVCD1) [MIM:603933]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.

**Sequence similarities**

Belongs to the PDGF/VEGF growth factor family.

**Cellular localization**

Secreted. VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a significant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin.

**Images**

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Sandwich ELISA - VEGF Hu (ab100662)

VEGF measured in biological fluids showing quantity (pg) per milliliter of sample tested

Curves showing concentrations huVEGF165 in NIBSC 02/286 using ab100662 VEGF human

Sandwich ELISA - ab100662 VEGF Human

Representative standard curve using ab100662

Typical standard curve
Representative standard curve using ab100662

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