

Product datasheet

Human VEGF ELISA Kit ab100663

[8 References](#) [3 Images](#)

Overview

Product name	Human VEGF ELISA Kit
Detection method	Colorimetric
Sample type	Cell culture extracts, Tissue Extracts
Assay type	Sandwich (quantitative)
Sensitivity	< 10 pg/ml
Range	8.23 pg/ml - 6000 pg/ml
Recovery	96 %

Sample specific recovery

Sample type	Average %	Range
Cell culture extracts	96.79	90% - 107%
Tissue Extracts	95.58	89% - 106%

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 cell lysates and tissue lysates.

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.

Tested applications **Suitable for:** Sandwich ELISA

Platform Microplate

Properties

Storage instructions

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

Components	1 x 96 tests
20X Wash Buffer Concentrate	1 x 25ml
2X Cell Lysate Buffer	1 x 5ml
300X HRP-Streptavidin Concentrate	1 x 200µl
5X Assay Diluent	1 x 15ml
5X Sample Diluent Buffer	1 x 10ml
Biotinylated anti-Human VEGF	2 vials
Recombinant Human VEGF Standard (lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml
VEGF Microplate (12 x 8 wells)	1 unit

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.

Applications

Our [Abpromise guarantee](#) covers the use of **ab100663** in the following tested applications.

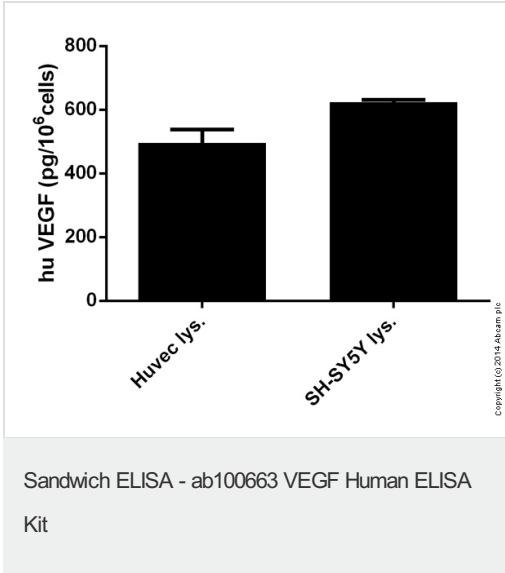
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
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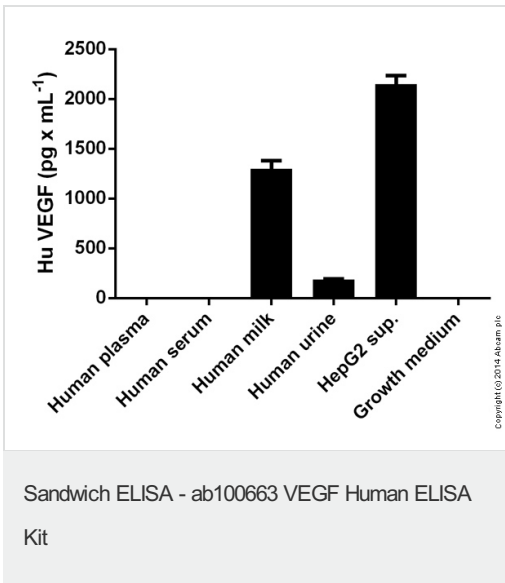
Sandwich ELISA

Use at an assay dependent concentration.

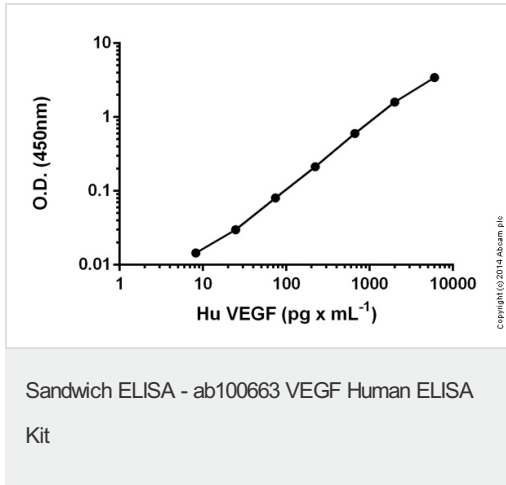
Images



Hu VEGF measured in cell lysates showing quantity (pg) per million cells tested



Hu VEGF in various fluids showing quantity (pg) per mL of tested sample



Standard curve : mean of duplicates (+/-SD) with background readings subtracted

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