abcam

Product datasheet

Rat VEGF ELISA Kit ab100786

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Overview

Product name	Rat VEGF ELISA Kit
Detection method	Colorimetric
Sample type	Cell culture supernatant, Serum, Plasma
Assay type	Sandwich (quantitative)
Sensitivity	< 2 pg/ml
Range	0.82 pg/ml - 200 pg/ml
Recovery	97 %

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	98.26	84% - 103%
Serum	97.43	83% - 103%
Plasma	96.42	85% - 104%

Assay duration	Multiple steps standard assay
Species reactivity	**Reacts with:** Rat
Product overview	Abcam's VEGF Rat ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of rat VEGF in serum, plasma, cellculture supernatants. This assay employs an antibody specific for rat 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-rat 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.
Platform	Microplate

Properties

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

Components	1 x 96 tests
120X HRP-Streptavidin Concentrate	1 x 200µl
20X Wash Buffer	1 x 25ml
5X Assay Diluent B	1 x 15ml
Assay Diluent A	1 x 30ml
Biotinylated anti-Rat VEGF	2 vials
Recombinant rat 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.

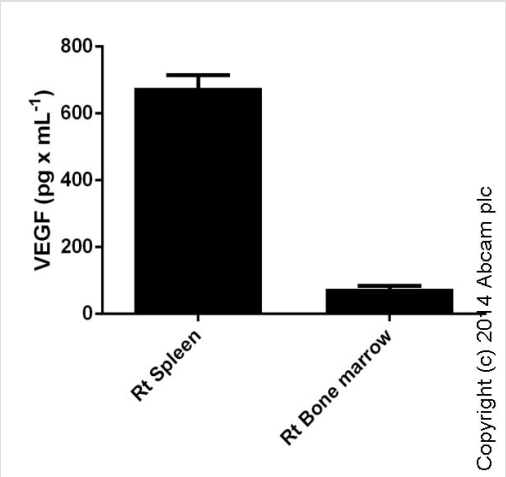
Tissue specificity Isoform VEGF189, isoform VEGF165 and isoform VEGF121 are widely expressed. Isoform VEGF206 and isoform VEGF145 are not widely expressed.

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.

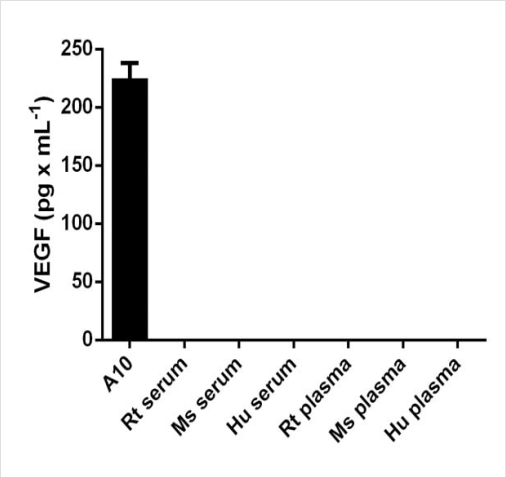
Cellular localization Secreted. VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a signicant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin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

Images



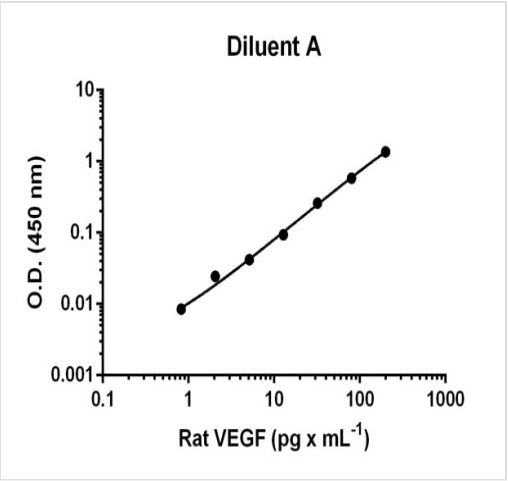
ab100786 VEGF Rat ELISA Kit

VEGF measured in rat spleen and rat bone marrow showing quantity (pg) per mL of tested sample. Samples were diluted 9-27 fold.



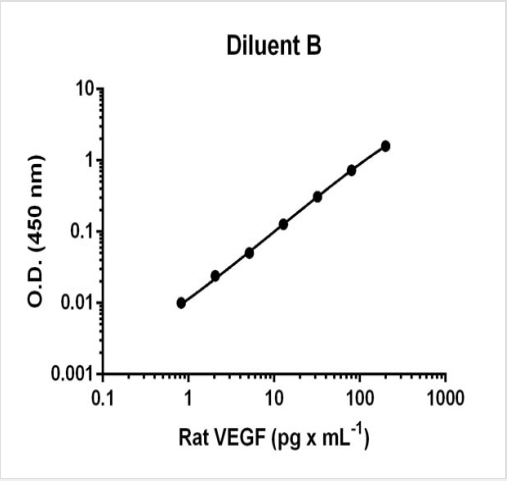
Sample results

VEGF measured in A10 cell culture supernatant and biological fluids showing quantity (pg) per mL of tested sample. RBL-1, PC12 and SV40LT-SIV cell culture supernatants were also assayed for rat VEGF and measured > 200 pg/mL.



Typical Standard Curve

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



Typical Standard Curve

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

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