Datasheet for ABIN6975430

VEGFA ELISA Kit

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Overview

Quantity:	96 tests
Target:	VEGFA
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	31.25 pg/mL - 2000 pg/mL
Minimum Detection Limit:	31.25 pg/mL
Application:	ELISA

Product Details

Purpose:	For the quantitative determination of human vascular endothelial cell growth factor (VEGF) concentrations in serum, plasma, cell culture supernates, tissue homogenates, cell lysates, urine.
Sample Type:	Cell Culture Supernatant, Cell Lysate, Plasma, Serum, Tissue Homogenate, Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Specificity:	This assay has high sensitivity and excellent specificity for detection of human VEGF. No significant cross-reactivity or interference between human VEGF and analogues was observed. Note: Limited by current skills and knowledge, it is impossible for us to complete the cross-reactivity detection between human VEGF and all the analogues, therefore, cross reaction may still exist.
Sensitivity:	25.297 pg/mL

Product Details

Components:	• Assay plate • Standard • HRP-avidin (100 x concentrate) • Biotin-antibody (100 x concentrate) • Sample Diluent • HRP-avidin Diluent • Biotin-antibody Diluent • Wash Buffer (25 x concentrate) • TMB Substrate • Stop Solution • Adhesive Strip

Target Details

Target:	VEGFA
Alternative Name:	vascular endothelial growth factor A (VEGFA Products)
Background:	Abbreviation: VEGFA Alias: RP1-261G23.1, MGC70609, MVCD1, VEGF, VEGF-A, VPF, vascular endothelial growth factor isoform VEGF165|vascular permeability factor
UniProt:	P15692
Pathways:	RTK Signaling, Glycosaminoglycan Metabolic Process, Regulation of Cell Size, Tube Formation, Signaling Events mediated by VEGFR1 and VEGFR2, Platelet-derived growth Factor Receptor Signaling, VEGFR1 Specific Signals, VEGF Signaling

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Sample Volume:	100 µL
Assay Time:	1 - 4.5 h
Plate:	Pre-coated
Protocol:	1. Prepare reagents, samples and standards as instructed. 2. Add 100 µL standard or sample to each well. Incubate 2 hours at 37 °C. 3. Remove the liquid of each well, don't wash. 4. Add 100 µL Biotin-antibody (1x) to each well. Incubate 1 hour at 37 °C. 5. Aspirate and wash 3 times. 6. Add 100 µL HRP-avidin (1x) to each well. Incubate 1 hour at 37 °C

7. Aspirate and wash 5 times.
8. Add 90 µL of TMB Substrate to each well. Incubate for 15-30 minutes at 37 °C. Protect from light.
9. Add 50 µL Stop Solution to each well. Read at 450 nm within 5 minutes.

Reagent Preparation:

1. Biotin-antibody (1x) - Centrifuge the vial before opening. Biotin-antibody requires a 100-fold dilution. A suggested 100-fold dilution is 10 µL of Biotin-antibody + 990 µL of Biotin-antibody Diluent.
2. HRP-avidin (1x) - Centrifuge the vial before opening. HRP-avidin requires a 100-fold dilution. A suggested 100-fold dilution is 10 µL of HRP-avidin + 990 µL of HRP-avidin Diluent.
3. Wash Buffer (1x) - If crystals have formed in the concentrate, warm up to room temperature and mix gently until the crystals have completely dissolved. Dilute 20 mL of Wash Buffer Concentrate (25 x) into deionized or distilled water to prepare 500 mL of Wash Buffer (1 x).
4. Standard Centrifuge the standard vial at 6000-10000rpm for 30s. Reconstitute the Standard with 1.0 mL of Sample Diluent. Do not substitute other diluents. This reconstitution produces a stock solution of 2000 pg/mL. Mix the standard to ensure complete reconstitution and allow the standard to sit for a minimum of 15 minutes with gentle agitation prior to making dilutions. Pipette 250 µL of Sample Diluent into each tube (S0-S6). Use the stock solution to produce a 2-fold dilution series (below). Mix each tube thoroughly before the next transfer. The undiluted Standard serves as the high standard (2000 pg/mL). Sample Diluent serves as the zero standard (0 pg/mL).

Note:

- Kindly use graduated containers to prepare the reagent. Please don't prepare the reagent directly in the Diluent vials provided in the kit.
- Bring all reagents to room temperature (18-25 °C) before use for 30 min.
- Prepare fresh standard for each assay. Use within 4 hours and discard after use.
- Making serial dilution in the wells directly is not permitted.
- Please carefully reconstitute Standards according to the instruction, and avoid foaming and mix gently until the crystals have completely dissolved. To minimize imprecision caused by pipetting, use small volumes and ensure that pipettors are calibrated. It is recommended to suck more than 10 µL for once pipetting.
- Distilled water is recommended to be used to make the preparation for reagents. Contaminated water or container for reagent preparation will influence the detection result.

Sample Preparation:

- It is recommended to use fresh samples without long storage, otherwise protein degradation and denaturationmay occur in these samples, leading to false results. Samples should therefore be stored for a short periodat 2 - 8 °C or aliquoted at -20 °C (≤1 month) or -80 °C (≤ 3 months). Repeated freeze-thawcycles should be avoided. Prior to assay, the frozen samples should be slowly thawed and centrifuged toremove precipitates.
- If the sample type is not specified in the instructions, a preliminary test is necessary to determinecompatibility with the kit.
- If a lysis buffer is used to prepare tissue homogenates or cell culture supernatant, there is a possibilityof causing a deviation due to the introduced chemical substance.The

Application Details

	recommended dilution factor is for reference only. • Please estimate the concentration of the samples before performing the test. If the values are not in therange of the standard curve, the optimal sample dilution for the particular experiment has to be determined.Samples should then be diluted with PBS (pH =7.0-7.2).
Assay Precision:	Intra-assay Precision (Precision within an assay): CV%<8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV%<10% Three samples of known concentration were tested in twenty assays to assess.
Restrictions:	For Research Use only

Handling

Storage:	4 °C,-20 °C
Storage Comment:	Unopened kit Store at 2 - 8°C. Do not use the kit beyond the expiration date. May be stored for up to 1 month at 2 - 8°C. Coated assay Try to keep it in a sealed aluminum foil bag, plate and avoid the damp. Standard May be stored for up to 1 month at 2 - 8° C. If Biotin-antibody don't make recent use, better keep it store at HRP-avidin -20°C. Biotin-antibody Diluent Opened kit HRP-avidin Diluent Sample May be stored for up to 1 month at 2 - 8°C. Diluent Wash Buffer TMB Substrate Stop Solution *Provided this is within the expiration date of the kit.
Expiry Date:	6 months

Publications

Product cited in:	You, Bi, Li, Zhang, Chen, Zhang, Li: "IL-17 induces reactive astrocytes and up-regulation of vascular endothelial growth factor (VEGF) through JAK/STAT signaling." in: **Scientific reports**, Vol. 7, pp. 41779, (2018) (PubMed). Yu, Lu, Li, Zhou, Zeng, Zhan, Yuan, Yang, Xia: "Correlation of Plasma Vascular Endothelial Growth Factor and Endostatin Levels with Symptomatic Intra- and Extracranial Atherosclerotic Stenosis in a Chinese Han Population." in: **Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association**, Vol. 26, Issue 5, pp. 1061-1070, (2017) (PubMed). Vingolo, Fragiotta, Mafrici, Cutini, Marinelli, Concistrè, Iannucci, Petramala, Letizia: "Vitreous and plasma changes of endothelin-1, adrenomedullin and vascular endothelium growth factor in patients with proliferative diabetic retinopathy." in: **European review for medical and**

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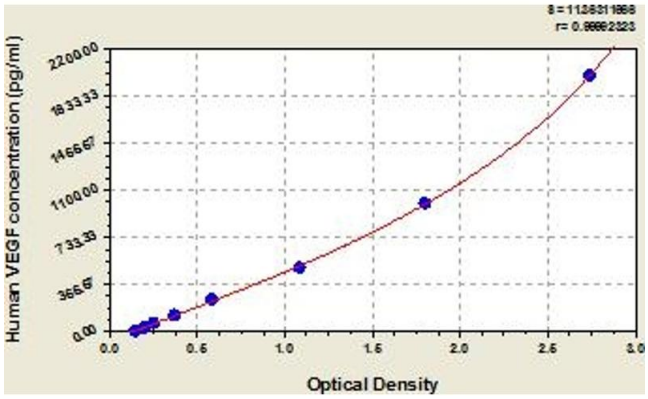
pharmacological sciences, Vol. 21, Issue 4, pp. 662-668, (2017) (PubMed).

Asadi, Torkaman, Hedayati, Mohajeri-Tehrani, Ahmadi, Gohardani: "Angiogenic effects of low-intensity cathodal direct current on ischemic diabetic foot ulcers: A randomized controlled trial." in: **Diabetes research and clinical practice**, Vol. 127, pp. 147-155, (2017) (PubMed).

Cui, Joo, Lee, Yu, Jeong, Kim, Seo: "Low temperature plasma induces angiogenic growth factor via up-regulating hypoxia-inducible factor 1α in human dermal fibroblasts." in: **Archives of biochemistry and biophysics**, Vol. 630, pp. 9-17, (2017) (PubMed).

There are more publications referencing this product on: Product page

Images



ELISA

Image 1. Typical Standard Curve