Datasheet for ABIN411382

VEGFC ELISA Kit

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Overview

Quantity:	96 tests
Target:	VEGFC
Binding Specificity:	AA 103-227
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human VEGF-C
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: T103-R227
Specificity:	Expression system for standard: NSO Immunogen sequence: T103-R227
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<3pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

Target:	VEGFC
Alternative Name:	VEGFC (VEGFC Products)
Background:	Protein Function: Growth factor active in angiogenesis, and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in angiogenesis of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-2 (KDR/FLK1) and VEGFR-3 (FLT4) receptors. . Background: Vascular endothelial growth factor C is a VEGF. The human gene encoding it is VEGFC. The protein encoded by this gene is a member of the platelet-derived growth factor/vascular endothelial growth factor(PDGF/VEGF) family, is active in angiogenesis, lymphangiogenesis and endothelial cell growth and survival, and can also affect the permeability of blood vessels. This secreted protein undergoes a complex proteolytic maturation, generating multiple processed forms which bind and activate VEGFR-3 receptors. Only the fully processed form can bind and activate VEGFR-2 receptors. This protein is structurally and functionally similar to vascular endothelial growth factor D(VEGF-D). The C terminus of VEGFC has cysteine-rich repeat units characteristic of the Balbiani ring 3 protein(BR3P) of the midge Chironomus tentans.1,2 The standard product used in this kit is recombinant human VEGF-C, consisting of 135 amino acids with the molecular mass of 23Kda after glycosylation. Synonyms: Vascular endothelial growth factor C,VEGF-C,Flt4 ligand,Flt4-L,Vascular endothelial growth factor-related protein,VRP,VEGFC, Full Gene Name: Vascular endothelial growth factor C Cellular Localisation: Secreted.
Gene ID:	7424
UniProt:	P49767
Pathways:	RTK Signaling, Signaling Events mediated by VEGFR1 and VEGFR2

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Tissue Specificity: Spleen, lymph node, thymus, appendix, bone marrow, heart, placenta, ovary, skeletal muscle, prostate, testis, colon and small intestine and fetal liver, lung and kidney, but not in peripheral blood lymphocyte.
Plate:	Pre-coated
Protocol:	human VEGF-C ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for VEGF-C has been precoated onto 96-well plates. Standards(NSO, T103-R227) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for VEGF-C is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human VEGF-C amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 4000pg/mL,2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL human VEGF-C standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human VEGF-C standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 198, Standard deviation: 6.93, CV(%): 3.5 • Sample 2: n=16, Mean(pg/ml): 1915, Standard deviation: 80.43, CV(%): 4.2 • Sample 3: n=16, Mean(pg/ml): 3096, Standard deviation: 145.5, CV(%): 4.7, • Sample 1: n=24, Mean(pg/ml): 236, Standard deviation: 10.62, CV(%): 4.5 • Sample 2: n=24, Mean(pg/ml): 2534, Standard deviation: 134.3, CV(%): 5.3 • Sample 3: n=24, Mean(pg/ml): 3497, Standard deviation: 202.8, CV(%): 5.8
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

Handling

Expiry Date:	12 months

Publications

Product cited in:

Leira, Ameijeira, Domínguez, López-Arias, Ávila-Gómez, Pérez-Mato, Sobrino, Campos, DAiuto, Leira, Blanco: "Periodontal inflammation is related to increased serum calcitonin gene-related peptide levels in patients with chronic migraine." in: **Journal of periodontology**, Vol. 90, Issue 10 , pp. 1088-1095, (2020) (PubMed).

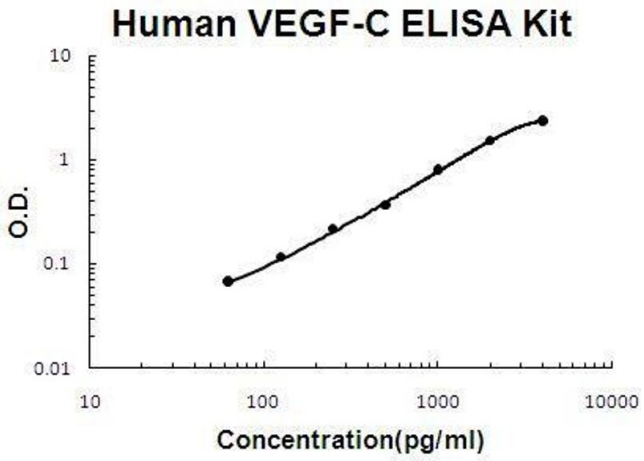
Tarperi, Sanchis-Gomar, Montagnana, Danese, Salvagno, Gelati, Skroce, Schena, Lippi: "Effects of endurance exercise on serum concentration of calcitonin gene-related peptide (CGRP): a potential link between exercise intensity and headache." in: **Clinical chemistry and laboratory medicine**, Vol. 58, Issue 10, pp. 1707-1712, (2020) (PubMed).

Pérez-Pereda, Toriello-Suárez, Ocejo-Vinyals, Guiral-Foz, Castillo-Obeso, Montes-Gómez, Martínez-Nieto, Iglesias, González-Quintanilla, Oterino: "Serum CGRP, VIP, and PACAP usefulness in migraine: a case-control study in chronic migraine patients in real clinical practice. " in: **Molecular biology reports**, Vol. 47, Issue 9, pp. 7125-7138, (2020) (PubMed).

Pinto-Sanchez, Hall, Ghajar, Nardelli, Bolino, Lau, Martin, Cominetti, Welsh, Rieder, Traynor, Gregory, De Palma, Pigrau, Ford, Macri, Berger, Bergonzelli, Surette, Collins, Moayyedi, Bercik: " Probiotic Bifidobacterium longum NCC3001 Reduces Depression Scores and Alters Brain Activity: A Pilot Study in Patients With Irritable Bowel Syndrome." in: **Gastroenterology**, Vol. 153, Issue 2, pp. 448-459.e8, (2017) (PubMed).

Lei, Zhu, Zhang, Duan, Lei, Huang: "Transient Receptor Potential Vanilloid Subtype 1 Inhibits Inflammation and Apoptosis via the Release of Calcitonin Gene-Related Peptide in the Heart after Myocardial Infarction." in: **Cardiology**, Vol. 134, Issue 4, pp. 436-43, (2016) (PubMed).

There are more publications referencing this product on: Product page



ELISA

Image 1. Human VEGF-C PicoKine ELISA Kit standard curve