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Datasheet for ABIN411370

VEGF ELISA Kit

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Overview

Quantity:	96 tests
Target:	VEGF
Binding Specificity:	AA 27-190
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat VEGF
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Plasma (citrate)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: A27-R190
Specificity:	Expression system for standard: NSO,A27-R190
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<1pg/mL

Product Details

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:	VEGF
Abstract:	VEGF Products
Background:	Background: Vascular permeability factor/vascular endothelial growth factor(VPF/VEGF), a potent cytokine expressed by most malignant tumors, has critical roles in vasculogenesis and both physiological and pathological angiogenesis. VEGF produced by tumor cells potently stimulates endothelial cell proliferation and angiogenesis and plays a key role in the pathophysiology of several neoplasias. VEGF may also play a pivotal role in mediating the development and progression of diabetic retinopathy. VEGF, a major regulator of angiogenesis, binds to two receptor tyrosine kinases, KDR/Flk-1 and Flt-1. The VEGF gene is mapped by fluorescence in situ hybridization to chromosome 6p12.The standard product used in this kit is recombinant rat VEGF164, which is a 25KDa single chain as well as a 50KDa dimer. Synonyms: Vascular endothelial growth factor A ,Vegfa , Full Gene Name: vascular endothelial growth factor A
Gene ID:	83785
UniProt:	B5DEK7

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.
Plate:	Pre-coated
Protocol:	rat VEGF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for VEGF has been precoated onto 96-well plates. Standards (NSO,A27-R190) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for VEGF 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

Application Details

	product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the rat VEGF amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.3pg/mL, 15.6pg/mL rat VEGF 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 rat cell culture supernates, serum or plasma(heparin, EDTA, citrate) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each rat VEGF standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 120, Standard deviation: 4.44, CV(%): 3.7 • Sample 2: n=16, Mean(pg/ml): 305, Standard deviation: 15.86, CV(%): 5.2 • Sample 3: n=16, Mean(pg/ml): 621, Standard deviation: 29.81, CV(%): 4.8, • Sample 1: n=24, Mean(pg/ml): 236, Standard deviation: 10.62, CV(%): 4.5 • Sample 2: n=24, Mean(pg/ml): 289, Standard deviation: 18.21, CV(%): 6.3 • Sample 3: n=24, Mean(pg/ml): 632, Standard deviation: 34.76, CV(%): 5.5
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
Expiry Date:	12 months

Publications

Product cited in:	Zhou, Tan, Wang, Wang: "Hypoxic preconditioning-induced autophagy enhances survival of engrafted endothelial progenitor cells in ischaemic limb." in: **Journal of cellular and molecular medicine**, Vol. 21, Issue 10, pp. 2452-2464, (2018) (PubMed). Duan, Lu, Wang, Zhang, Mao, Cao, Lin, Zhang, Shuai, Shen: "The long-term fate of mesenchymal stem cells labeled with magnetic resonance imaging-visible polymersomes in cerebral ischemia." in: **International journal of nanomedicine**, Vol. 12, pp. 6705-6719, (2018) (PubMed). Ling, Feng, Wei, Wang, Wang, Zhang, He, Wang, Zeng, Xiong: "Effects of low-intensity pulsed ultrasound (LIPUS)-pretreated human amnion-derived mesenchymal stem cell (hAD-MSC)

Publications

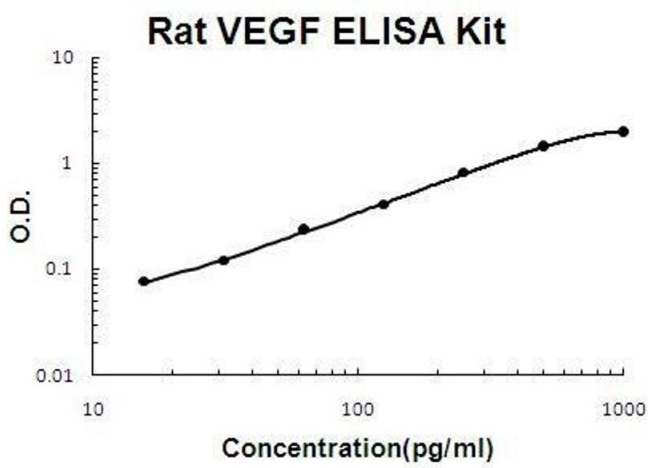
transplantation on primary ovarian insufficiency in rats." in: **Stem cell research & therapy**, Vol. 8 , Issue 1, pp. 283, (2018) (PubMed).

Machado, Rodrigues-Baptista, Alessandra-Perini, Soares de Moura, Santos, Pereira, Marinho da Silva, Souza, Nasciutti, Perini: "Euterpe oleracea Extract (Açaí) Is a Promising Novel Pharmacological Therapeutic Treatment for Experimental Endometriosis." in: **PLoS ONE**, Vol. 11, Issue 11, pp. e0166059, (2017) (PubMed).

Gong, Yuan, Liu, Qi: "Investigation of the Effects and Mechanisms of Mai Tong Formula on Lower Limb Macroangiopathy in a Spontaneous Diabetic Rat Model." in: **Journal of diabetes research**, Vol. 2016, pp. 8076796, (2017) (PubMed).

There are more publications referencing this product on: Product page

Images



ELISA

Image 1. Rat VEGF PicoKine ELISA Kit standard curve