

Datasheet for ABIN2859219

FLT4 ELISA Kit



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Overview

Quantity:	96 tests
Target:	FLT4
Binding Specificity:	AA 25-770
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	156-10.000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat VEGFR3/FLT4
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: Y25-D770
Specificity:	Expression system for standard: NSO Immunogen sequence: Y25-D770
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity: <10pg/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: FLT4

Alternative Name: FLT4 ([FLT4 Products](#))

Background: Protein Function: Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFC and VEGFD, and plays an essential role in adult lymphangiogenesis and in the development of the vascular network and the cardiovascular system during embryonic development. Promotes proliferation, survival and migration of endothelial cells, and regulates angiogenic sprouting. Signaling by activated FLT4 leads to enhanced production of VEGFC, and to a lesser degree VEGFA, thereby creating a positive feedback loop that enhances FLT4 signaling. Modulates KDR signaling by forming heterodimers. Mediates activation of the MAPK1/ERK2, MAPK3/ERK1 signaling pathway, of MAPK8 and the JUN signaling pathway, and of the AKT1 signaling pathway. Phosphorylates SHC1. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3- kinase. Promotes phosphorylation of MAPK8 at 'Thr-183' and 'Tyr- 185', and of AKT1 at 'Ser-473' (By similarity). .

Background: Fms-related tyrosine kinase 4, also known as FLT4 or VEGFR3, is a protein which in humans is encoded by the FLT4 gene. It is mapped to 5q35.3. This gene encodes a tyrosine kinase receptor for vascular endothelial growth factors C and D. The protein is thought to be involved in lymphangiogenesis and maintenance of the lymphatic endothelium. FLT4 has an essential role in the development of the embryonic cardiovascular system before the emergence of the lymphatic vessels. It has been found that FLT4, which provides proangiogenic signaling when expressed on endothelium, may also have antiangiogenic properties when expressed at an avascular site by nonendothelial cells. FLT4 is also regarded as a regulator of vascular network formation.

Synonyms: Vascular endothelial growth factor receptor 3, VEGFR-3, 2.7.10.1, Fms-like tyrosine kinase 4, FLT-4, Tyrosine-protein kinase receptor FLT4, Flt4, Flt-4, Vegfr3,

Full Gene Name: Vascular endothelial growth factor receptor 3

Cellular Localisation: Cell membrane, Single-pass type I membrane protein . Cytoplasm .

Nucleus . Ligand-mediated autophosphorylation leads to rapid internalization..

Target Details

Gene ID:	114110
UniProt:	Q91ZT1
Pathways:	RTK Signaling , Signaling Events mediated by VEGFR1 and VEGFR2 , VEGF Signaling

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:	Sequence similarities: Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.
Plate:	Pre-coated
Protocol:	rat VEGFR3 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for VEGFR3 has been precoated onto 96-well plates. Standards(NSO, Y25-D770) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for VEGFR3 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 rat VEGFR3 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 10,000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL rat VEGFR3 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 or serum to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat VEGFR3 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 1580, Standard deviation: 52.14, CV(%): 3.3• Sample 2: n=16, Mean(pg/ml): 3021, Standard deviation: 142, CV(%): 4.7• Sample 3: n=16, Mean(pg/ml): 6135, Standard deviation: 319, CV(%): 5.2,• Sample 1: n=24, Mean(pg/ml): 1749, Standard deviation: 80.45, CV(%): 4.6• Sample 2: n=24, Mean(pg/ml): 3312, Standard deviation: 182.2, CV(%): 5.5• Sample 3: n=24, Mean(pg/ml): 6758, Standard deviation: 432.5, CV(%): 6.4
Restrictions:	For Research Use only

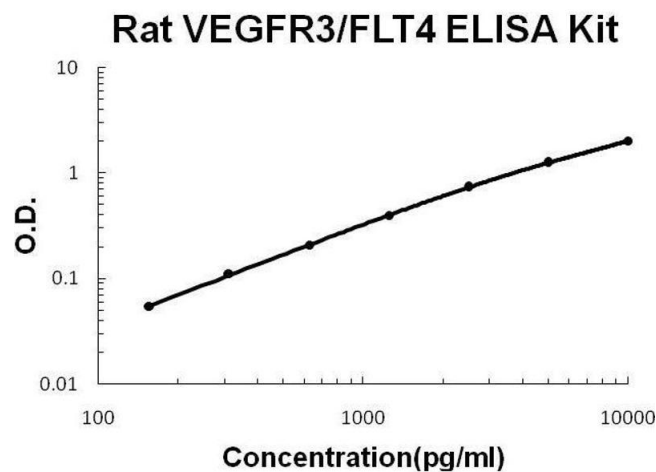
Handling

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:	Li, Fan, Song, Zhang, Chen, Li, Mi, Ma, Song, Tao, Li: "Expression of angiopoietin-2 and vascular endothelial growth factor receptor-3 correlates with lymphangiogenesis and angiogenesis and affects survival of oral squamous cell carcinoma." in: PLoS ONE , Vol. 8, Issue 9, pp. e75388, (2013) (PubMed).
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Images



ELISA

Image 1. Rat VEGFR3/FLT4 PicoKine ELISA Kit standard curve