Mouse Vascular Endothelial cell Growth Factor,VEGF ELISA KIT

Product Code	CSB-E04756m
Abbreviation	VEGFA
Protein Biological Process 1	Cytokine
Target Name	vascular endothelial growth factor A
Uniprot No.	Q00731
Alias	RP1-261G23.1, MGC70609, MVCD1, VEGF, VEGF-A, VPF, vascular endothelial growth factor isoform VEGF165|vascular permeability factor
Product Type	ELISA Kit
Immunogen Species	Mus musculus (Mouse)
Protein Biological Process 3	Angiogenesis
Sample Types	serum, plasma, cell culture supernates, tissue homogenates
Detection Range	3.906 pg/mL-250 pg/mL
Sensitivity	0.857 pg/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Cancer
Gene Names	Vegfa
Tag Info	quantitative
Protein Description	Sandwich
Description	The mouse VEGFA ELISA Kit quantitates mouse VEGFA levels in multiple samples, including serum, plasma, cell culture supernates, and tissue homogenates. VEGFA usually referred to simply as VEGF, is a renowned angiogenic factor with potent mitogenic, pro-survival, anti-apoptotic, and vascular permeative properties. It plays an essential role in capillary maintenance, endothelial cell and myofiber survival, exercise-induced angiogenesis, and muscular endurance. VEGF binds to its receptor VEGFR1 and VEGFR2, activating several downstream signaling pathways, including MAPK and PI3K, that stimulate the expression of genes involving the promotion of endothelial cells' proliferation, migration, survival, and vascular permeability.

VEGF-mediated signaling is associated with key aspects of tumorigenesis, including the function of cancer stem cells and tumor initiation.

This kit employs the sandwich-ELISA mechanism in conjugation with VEGFA antibody-VEGFA antigen-specific binding as well as HRP-TMB chromogenic reaction to measure the concentration of VEGFA in the samples. The kit is characterized by high sensitivity, strong specificity, good linearity, high recovery, and a precision of less than 10%.

Target Details

This gene is a member of the PDGF/VEGF growth factor family and encodes a protein that is often found as a disulfide linked homodimer. This protein is a glycosylated mitogen that specifically acts on endothelial cells and has various effects, including mediating increased vascular permeability, inducing angiogenesis, vasculogenesis and endothelial cell growth, promoting cell migration, and inhibiting apoptosis. Elevated levels of this protein is linked to POEMS syndrome, also known as Crow-Fukase syndrome. Mutations in this gene have been associated with proliferative and nonproliferative diabetic retinopathy. Alternatively spliced transcript variants, encoding either freely secreted or cell-associated isoforms, have been characterized. There is also evidence for the use of non-AUG (CUG) translation initiation sites upstream of, and in-frame with the first AUG, leading to additional isoforms.

Product 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.

	Intra-Assay Precision			Inter-Assay Precision		
Sample	1	2	3	1	2	3
n	20	20	20	20	20	20
Mean(pg/ml)	31.523	32.069	31.342	31.108	30.575	30.096
SD	0.032	0.050	0.024	0.062	0.069	0.073
CV(%)	3.573	5.530	2.687	6.981	7.859	8.437

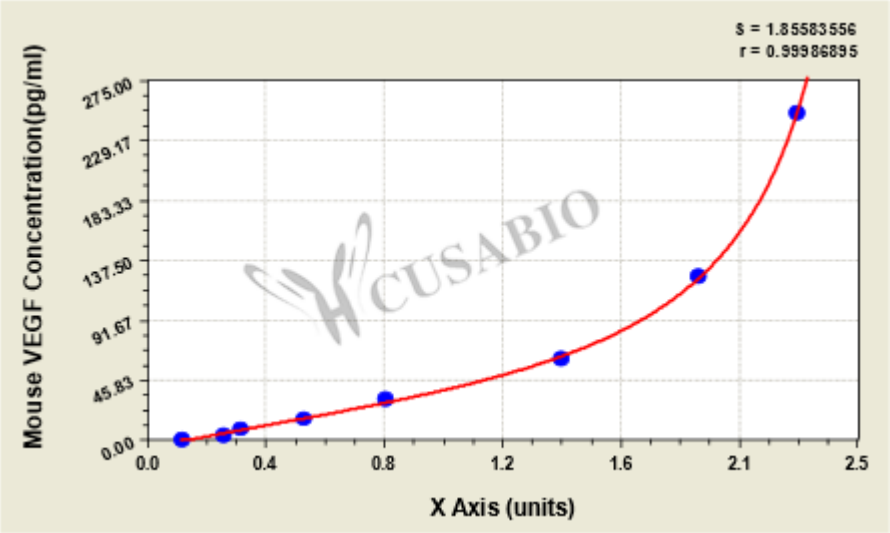
Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of Mouse VEGF in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

	Sample	Serum(n=4)
1:1	Average %	95
	Range %	80-100
1:2	Average %	97
	Range %	91-110
1:4	Average %	93
	Range %	85-95
1:8	Average %	95
	Range %	90-100
	Sample	Cell culture supernates (n=4)
1:2	Average %	91
	Range %	84-97
1:4	Average %	94
	Range %	91-111
1:8	Average %	90
	Range %	85-95
1:16	Average %	95
	Range %	87-102

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



pg/ml	OD1	OD2	Average	Corrected
0	0.135	0.129	0.132	
3.906	0.267	0.289	0.278	0.146
7.813	0.335	0.331	0.333	0.201
15.625	0.566	0.536	0.551	0.419
31.25	0.824	0.841	0.833	0.701
62.5	1.524	1.353	1.439	1.307
125	1.904	1.921	1.913	1.781
250	2.281	2.214	2.248	2.116

Msds

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