

Biotin Conjugated Anti-Human VEGFA Antibody [PSH12-93] - Detector

HA723497B



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Dog
Applications:	ELISA(Det), ELISA
Clone number:	PSH12-93

Description: Vascular endothelial growth factor A (VEGF-A) is a protein that in humans is encoded by the VEGFA gene. This gene is a member of the platelet-derived growth factor (PDGF)/vascular endothelial growth factor (VEGF) 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. Alternatively spliced transcript variants, encoding either freely secreted or cell-associated isoforms, have been characterized. VEGF-A shows prominent activity with vascular endothelial cells, primarily through its interactions with the VEGFR1 and -R2 receptors found prominently on the endothelial cell membrane. However, it does have effects on a number of other cell types (e.g., stimulation monocyte/macrophage migration, neurons, cancer cells, kidney and epithelial cells). In vitro, VEGF-A has been shown to stimulate endothelial cell mitogenesis and cell migration. VEGF-A is also a vasodilator and increases microvascular permeability and was originally referred to as vascular permeability factor.

Conjugate:	Biotin-conjugated
Immunogen:	Recombinant protein within Human VEGF aa 27-147 (HA210929).
Positive control:	Recombinant Human VEGFA protein (HA210929).
Subcellular location:	Secreted.
Database links:	SwissProt: P15692 Human

Recommended Dilutions:

ELISA(Det)	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH12-91] to Human VEGFA antibody (Capture) (HA723493) and recombinant Human VEGFA protein (HA210929) as the standard. The reference range value is 31.3-4,000 pg/mL.
ELISA	Use at an assay dependent concentration.

Storage Buffer:	1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.05% Proclean 300.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.
Purity:	Protein A affinity purified.

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Service mail:support@huabio.cn

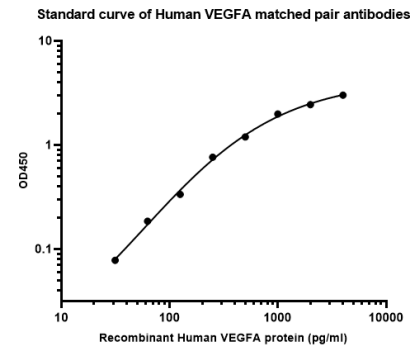
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Images

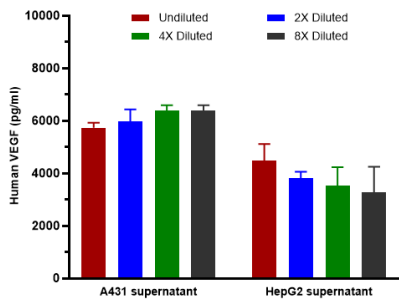
Fig1: Sandwich ELISA analysis of Human VEGFA matched pair antibodies

Capture: HA723493, Human VEGFA Rabbit mAb [PSH12-91]
Detector: HA723496, Human VEGFA Rabbit mAb [PSH12-93]



Elisa assay was performed by coating wells of a 96-well plate with 50 μ l per well of capture antibody (HA723493) diluted in carbonate/bicarbonate buffer, at a concentration of 5 μ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human VEGFA protein (HA210929) starting from 4,000 pg/ml to 0 pg/ml and detect antibody (HA723496, Biotin, 0.2 μ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 50 μ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

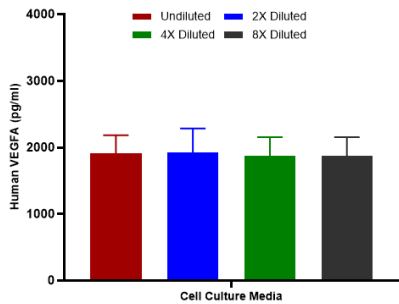
Fig2: Interpolated concentrations of native VEGFA in A431 and HepG2 cell culture supernatant.



Capture: HA723493, Human VEGFA Rabbit mAb [PSH12-91]
Detector: HA723496, Human VEGFA Rabbit mAb [PSH12-93]

The concentrations of VEGFA measured in duplicate and interpolated from the VEGFA standard curve and corrected for sample dilution. Undiluted samples are as follows: A431 cell culture supernatant 12.5% and HepG2 cell culture supernatant 25%. The interpolated dilution factor corrected values are plotted (mean $\pm$ SD, n=2). The mean VEGFA concentration was determined to be 6,139 pg/ml in A431 cell culture supernatant and 3,773 pg/ml in HepG2 cell culture supernatant.

Fig3: Interpolated concentrations of spiked VEGF in human cell culture media samples.



Capture: HA723493, Human VEGFA Rabbit mAb [PSH12-91]
Detector: HA723496, Human VEGFA Rabbit mAb [PSH12-93]

The concentrations of VEGFA were measured in duplicates, interpolated from the VEGFA standard curves and corrected for sample dilution. Undiluted samples are as follows: cell culture media 25%. The interpolated dilution factor corrected values are plotted (mean $\pm$ SD, n=2).

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Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Rizvi F et al. VEGFA mRNA-LNP promotes biliary epithelial cell-to-hepatocyte conversion in acute and chronic liver diseases and reverses steatosis and fibrosis. *Cell Stem Cell*. 2023 Dec
2. White AL et al. VEGFA Isoforms as Pro-Angiogenic Therapeutics for Cerebrovascular Diseases. *Biomolecules*. 2023 Apr

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