VEGFR-1 Protein, Human (HEK293, His-Avi)

Cat. No.:	HY-P78537
Synonyms:	FLT; FLT1; Flt-1; FRT; VEGF R1; VEGFR1
Species:	Human
Source:	HEK293
Accession:	P17948 (S27-N756)
Gene ID:	2321
Molecular Weight:	100-120 kDa

PROPERTIES

Biological Activity	1. Immobilized Human PGF, hFc Tag at 0.5μg/ml (100μl/Well) on the plate. Dose response curve for Human VEGF R1, His Tag with the EC_{50} of 12.8ng/ml determined by ELISA. 2. Immobilized Human VEGF R1, His Tag at 2μg/ml (100μl/well) on the plate. Dose response curve for Biotinylated Human VEGF121, His Tag with the EC_{50} of 36.5ng/ml determined by ELISA.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	VEGFR-1 Protein is a tyrosine-protein kinase that serves as a cell-surface receptor for VEGFA, VEGFB, and PGF. It plays a crucial role in various biological processes, including embryonic vasculature development, angiogenesis regulation, cell survival, cell migration, macrophage function, chemotaxis, and cancer cell invasion. Additionally, VEGFR-1 acts as a positive regulator of postnatal retinal hyaloid vessel regression and may function as a negative regulator of embryonic angiogenesis by inhibiting excessive endothelial cell proliferation. In adulthood, it promotes endothelial cell proliferation, survival, and angiogenesis, although its proliferative effects appear to be cell-type specific. VEGFR-1 has a high affinity for VEGFA and acts as a negative regulator of its signaling by limiting the availability of free VEGFA and preventing its binding to KDR. It modulates KDR signaling by forming heterodimers with KDR. Ligand binding to VEGFR-1 activates several signaling cascades, including PLCG, MAPK1/ERK2, MAPK3/ERK1, AKT1, and PI3K pathways. VEGFR-1 also phosphorylates SRC, YES1, CBL, AKT1, PTK2/FAK1, and PLCG.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA