

Recombinant Human Vascular Endothelial Growth Factor Receptor-1 D3, His

Cat. No. VEGFR1-77H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human VEGFR-1 D1-3 produced in E.Coli is monomeric, glycosylated, polypeptide containing 298 amino acids fragment (31-328) and having a molecular mass of 43 kDa. The receptor protein contains only the first 3 extracellular domains, which contain all the information necessary for binding of VEGF. The VEGFR1 is purified by proprietary chromatographic techniques.
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Species	Human
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Source	Insect Cells
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Description	Endothelial cells express three different vascular endothelial growth factor (VEGF) receptors, belonging to the family of receptor tyrosine kinases (RTKs). They are named VEGFR-1 (Flt-1), VEGFR-2 (KDR/Flk-1), VEGFR-3 (Flt-4). Their expression is almost exclusively restricted to endothelial cells, but VEGFR-1 can also be found on monocytes, dendritic cells and on trophoblast cells. The flt-1 gene was first described in 1990. The receptor contains seven immunoglobulin-like extracellular domains, a single transmembrane region and an intracellular split tyrosine kinase domain. Compared to VEGFR-2 the Flt-1 receptor has a higher affinity for VEGF but a weaker signaling activity. VEGFR-1 thus leads not to proliferation of endothelial cells, but mediates signals for differentiation. Interestingly a naturally occurring soluble variant of VEGFR-1 (sVEGFR-1) was found in HUVE supernatants in 1996, which is generated by alternative splicing of the flt-1 mRNA. The biological functions of sVEGFR-1 still are not clear, but it seems to be an endogenous regulator of angiogenesis, binding
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	VEGF with the same affinity as the full-length receptor.
Physical Appearance	Sterile Filtered clear solution.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE
Formulation	VEGFR1-His is supplied in 1x PBS and 50% glycerol.
Storage	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Please avoid freeze thaw cycles.
GENE INFORMATION	
Synonyms	FLT-1; FLT1; Tyrosine-protein kinase receptor FLT; Flt-1; Tyrosine-protein kinase FRT; Fms-like tyrosine kinase 1; VEGFR-1; EC 2.7.10.1; VEGFR1; Tyrosine-protein kinase receptor FLT; Vascular permeability factor receptor; fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor); soluble VEGF receptor 1-14; soluble VEGFR1 variant 2; soluble VEGFR1 variant 21; vascular endothelial growth factor/vascular permeability factor receptor; vascular endothelial growth factor receptor 1.