

Recombinant Human sVEGFR-2/Fc Chimera

Description: Recombinant human soluble Vascular Endothelial Growth Factor Receptor-2 (sVEGFR-2_{D1-7}) was fused with the Fc part of human IgG₁. The recombinant mature sVEGFR-2_{D1-7}/Fc is a disulfide-linked homodimeric protein. The sVEGFR-2_{D1-7}/Fc monomers have a mass of approximately 160 kDa. The soluble receptor protein consists of all 7 extracellular domains (Met1-Ala757), which contain all the information necessary for high affinity ligand binding.

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), and VEGFR-3 (Flt-4). Their expression is almost exclusively restricted to endothelial cells, but VEGFR-1 can also be found on monocytes. All VEGF-receptors have seven immunoglobulin-like extracellular domains, a single transmembrane region and an intracellular split tyrosine kinase domain. VEGFR-2 has a lower affinity for VEGF than the Flt-1 receptor, but a higher signalling activity. Mitogenic activity in endothelial cells is mainly mediated by VEGFR-2 leading to their proliferation. Differential splicing of the *flt-1* gene leads to the formation of a secreted, soluble variant of VEGFR-1 (sVEGFR-1). No naturally occurring, secreted forms of VEGFR-2 have so far been reported. The binding of VEGF₁₆₅ to VEGFR-2 is dependent on heparin.

Source:	Insect cells
Molecular Weight:	160 kDa
Subunit:	glycosylated dimer
Purity:	> 90%, by SDS-PAGE and visualised by silver stain
Endotoxin level:	< 0.1 ng per ug of sVEGFR-2
Stabilizer:	none
Buffer:	PBS; pH 7.4
Formulation:	lyophilised

Biological Activity: The activity of sVEGFR-2/Fc was determined by its ability to inhibit the VEGF-dependent proliferation of human umbilical vein endothelial cells. The ED₅₀ for this effect is typically 10-30 ng/ml.

Reconstitution: The lyophilised sVEGFR-2/Fc is soluble in water and most aqueous buffers. The lyophilised sVEGFR-2/Fc should be reconstituted in PBS or medium to a concentration not lower than 50 µg/ml.

Stability: Lyophilised samples are stable for greater than six months at -20°C to -70°C. Reconstituted sVEGFR-2/Fc should be stored in working aliquots at -20°C. **Avoid repeated freeze-thaw cycles!**

Usage: sVEGFR-2/Fc is offered for research use. Not for drug use. **Not for human use!**

Catalogue number: SFC-007	Size: 10 µg
	Range: 10-100 ng/ml

Literature: [Röckl et al., Exp Cell Res 241:161, 1998]