

Recombinant Human sKDR_{D1-7}

Catalog Number: CRF104A

Size: 5 µg

Description: Recombinant Human soluble Vascular Endothelial Growth Factor Receptor-2 (sKDR_{D1-7}) is produced as a non-chimeric protein in a monomeric form. The soluble receptor protein consists of all 7 extracellular domains, which contain all the information necessary for high affinity ligand binding. The receptor monomers have a mass of approximately 116 kDa. 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. 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 signaling 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

Units/Vial: 5 x 10²

Range: 0.1-10.0 ng/ml

Molecular Weight: 116 kDa

Specific Activity: 1 x 10⁵ units/mg

Purity: > 95% (SDS-PAGE; HPLC)

Endotoxin Level: < 0.1 ng per µg of sKDR

Stabilizer: none

Buffer: 10 mM Tris, 100 mM NaCl; pH 8.0

Formulation: Lyophilized

Biological Activity: The activity of recombinant human sVEGFR-2 was determined by its ability to abolish the binding of iodinated VEGF to solid surfaces or cell surfaces. The ED₅₀ for this effect is typically 10.0 ng/ml.

Reconstitution: The lyophilized human sKDR is soluble in water and most aqueous buffers. The lyophilized powder should be reconstituted in water or PBS to a concentration of not lower than 100 µg/ml.
Note: Always centrifuge vial before opening.

Stability: The material is stable for greater than six months at -20° C to -70° C. After the first thawing it is recommended to aliquot the material, because repeated freeze-thaw cycles will decrease the activity. Store at 4°C not longer than 2 days. **Avoid repeated freezing thaw cycles!**

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



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