

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse VEGFR2/KDR/Fik-1 protein			
	Mouse VEGFR2 (Ala20-Glu762) Accession # P35918	IEGRMD	Human IgG ₁ (Pro100-Lys330)	6-His tag
	N-terminus		C-terminus	
N-terminal Sequence	Ala20			
Analysis				
Structure / Form	Disulfide-linked homodimer			
Predicted Molecular Mass	110 kDa (monomer)			

SPECIFICATIONS

SDS-PAGE	166-191 kDa, reducing conditions
Activity	Measured by its ability to inhibit the VEGF-dependent proliferation of HUVEC human umbilical vein endothelial cells. The ED ₅₀ for this effect is 10-30 ng/mL in the presence of 5 ng/mL recombinant mouse VEGF.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

VEGFR2 (KDR/Fik-1), VEGFR1 (Flt-1) and VEGFR3 (Flt-4) belong to the class III subfamily of receptor tyrosine kinases (RTKs). All three receptors contain seven immunoglobulin-like repeats in their extracellular domains and kinase insert domains in their intracellular regions. The expression of VEGFR1, 2, and 3 is almost exclusively restricted to the endothelial cells. These receptors are likely to play essential roles in vasculogenesis and angiogenesis.

Mouse VEGFR2 cDNA encodes a 1367 amino acid (aa) residue precursor protein with a 19 aa residue signal peptide. Mature VEGFR2 is composed of a 743 aa residue extracellular domain, a 22 aa residue transmembrane domain and a 583 aa residue cytoplasmic domain. In contrast to VEGFR1 which binds both PIGF and VEGF with high affinity, VEGFR2 binds VEGF but not PIGF with high affinity. The recombinant soluble VEGFR2 Fc Chimera binds VEGF with high affinity and is a potent VEGF antagonist.

References:

1. Ferra, N. and R. Davis-Smyth (1997) *Endocrine Reviews* **18**:4.
2. Achen, M.G. *et al.* (1998) *Proc. Natl. Acad. Sci. USA.* **95**:548.