Recombinant Mouse VEGFR2/KDR/Flk-1 His-tag

Catalog Number: 10095-KD

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse VEGFR2/KDR/Flk-1 protein Ala20-Glu762, with a C-terminal 6-His tag Accession # P35918
N-terminal Sequence Analysis	Ala20
Structure / Form	Monomer
Predicted Molecular Mass	844 kDa

SPECIFICATIONS

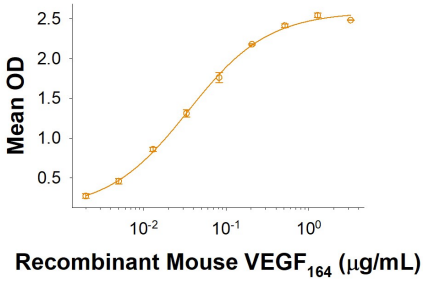
SDS-PAGE	120-132 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse VEGFR2/KDR/Flk-1 His-tag (Catalog # 10095-KD) is immobilized at 0.5 µg/mL, 100 µL/well, the concentration of Recombinant Mouse VEGF 164 (Catalog # 493-MV) that produces 50% of the optimal binding response is 0.015-0.12 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 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.

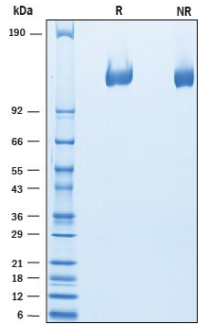
DATA

Binding Activity



When Recombinant Mouse VEGFR2/KDR/Flk-1 (Catalog # 10095-KD) is immobilized at 0.5 µg/mL, 100 µL/well, Recombinant Mouse VEGF 164 (Catalog # 493-MV) binds with an ED_{50} of 0.015-0.12 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Mouse VEGFR2/KDR/Flk-1 His-tag (Catalog # 10095-KD) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 120-132 kDa.

BACKGROUND

VEGFR2 (KDR/Flk-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 a tyrosine kinase 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. Mature mouse VEGFR2 is composed of a 743aa residue extracellular domain, a 21 aa residue transmembrane domain and a 584 aa residue cytoplasmic domain. The mature mouse VEGFR2 shares 80% and 93% sequence identity to human and rat VEGFR2. In contrast to VEGFR1 which binds both PlGF and VEGF with high affinity, VEGFR2 binds VEGF but not PlGF with high affinity. The recombinant soluble VEGFR2 binds VEGF with high affinity and is a potent VEGF antagonist (1, 2).

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.

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