Recombinant Human Flt-3/Flk-2 His-tag

Catalog Number: 10284-F3

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human Flt-3/Flk-2 protein Asn27-Asn541, with a C-terminal 6-His tag Accession # P36888
N-terminal Sequence Analysis	Asn27
Predicted Molecular Mass	59 kDa

SPECIFICATIONS

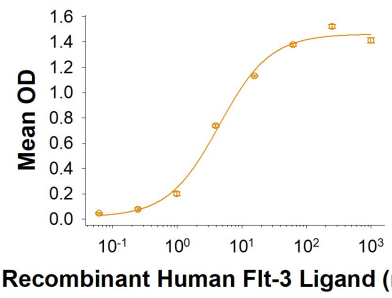
SDS-PAGE	82-93 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Flt-3/Flk-2 His-tag is captured onto a His Tag Antibody (Catalog # MAB050R) coated plate, Recombinant Human Flt-3 Ligand (Catalog # 308-FK) binds with an ED_{50} of 2-12 ng/mL.
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.

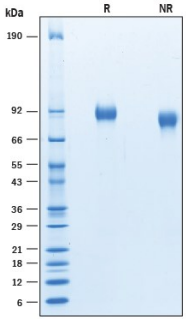
DATA

Binding Activity



When Recombinant Human Flt-3/Flk-2 His-tag (Catalog # 10284-F3) is captured onto a His Tag Antibody (Catalog # MAB050R) coated plate, Recombinant Human Flt-3 Ligand (Catalog # 308-FK) binds with an ED_{50} of 2-12 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Human Flt-3/Flk-2 His-tag was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands 80-95 at kDa.

BACKGROUND

The Flt-3 (fms-like tyrosine kinase) receptor, also named Flk-2 (fetal liver kinase) and Stk-1(stem cell tyrosine kinase) is a 130-155 kDa member of the class III subfamily of receptor tyrosine kinases that also includes KIT, the receptor for SCF and FMS, the receptor for M-CSF (1). The extracellular region of these receptors contains five immunoglobulin-like domains and the intracellular region contains a split kinase domain. Human Flt-3 cDNA encodes a 993 amino acid (aa) type I membrane protein with a 26 aa signal peptide, a 515 aa extracellular domain (ECD) with 10 potential N-linked glycosylation sites, a 21 aa transmembrane domain and a 431 aa cytoplasmic domain. Within ECD human Flt-3 shares 85% and 82% aa sequence identity with mouse and rat Flt-3, respectively. Flt-3 expression has been detected in various tissues, including placenta, gonads, and tissues of nervous and hematopoietic origin. Among hematopoietic cells, the expression of Flt-3 was found to be restricted to the highly enriched stem/progenitor cell populations. The ligand for Flt-3 (FL) has been identified to be a transmembrane protein with structural homology to M-CSF and SCF. Recombinant soluble Flt-3/Fc chimeric protein has been shown to bind FL with high affinity and is a potent FL antagonist (2).

References:

1. Rosnet, O. *et al.* (1996) Acta. Haemato. **95**:218.
2. Drexler, H.G. (1996) Leukemia **10**:588.

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