Recombinant Human FLT3 Ligand Protein

Catalog Number: GMP-TL505

Product Name	
Generic Name	Recombinant Human FLT3 Ligand Protein
Synonym	FLT3LG, FL, FLT3L, Flt3 ligand

Product Information	
Construction	A DNA sequence encoding the human FLT3 Ligand（NP_001450.2）was expressed with a His tag at the C-terminus.
Expression Host	HEK293 cells
QC Testing Purity	> 90 % as determined by SDS-PAGE
Activity	Determined by the dose-dependent stimulation of the proliferation of AML5 cells. The expected ED_{50} for this effect is ≤ 10 ng/ml.
Endotoxin	< 0.1 EU per 1μg of the protein as determined by the LAL method.
Molecular Mass	The recombinant human FLT3 Ligand protein contains 161 amino acids with a predicted molecular weight of 18.4 kD.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % mannitol are added as protectants before lyophilization.
Stability & Storage	24 months at 2 °C to 8 °C in lyophilized state. 6 months at -20 °C under sterile conditions after reconstitution. 12 months at -80 °C under sterile conditions after reconstitution. Recommend to aliquot the protein into smaller quantities after reconstituting with water for injection, normal saline or PBS, and keep the diluted concentration above 100 μg/mL. Avoid repeated freeze-thaw cycles.

Background

FLT3 ligand is a growth factor that regulates the proliferation of early hematopoietic cells. FLT 3-ligand binds to cells expressing tyrosine kinase receptor FLT3. The FLT3 ligand itself does not stimulate the proliferation of early hematopoietic cells, but rather synergistically induces growth and differentiation with other CSFs and interleukins. Unlike SCF, FLT3 ligand has no effect on mast cells. Multiple subtypes of FLT3-ligands have been identified.
The main bioactive form is anchored on the cell surface as the extracellular domain of transmembrane protein (209 a.). The membrane binding isomers can be cleaved by proteins to form biologically active soluble isomers.

References

1. Measurable residual disease (MRD) monitoring by NGS before allogeneic hematopoietic cell transplantation in AML.Thol F, Gabdoulline R, Liebich A, Klement P, Schiller J, Kandziora C, Hambach L, Stadler M, Koenecke C, Flintrop M, Pankratz M, Wichmann M, Neziri B, Büttner K, Heida B, Klesse S, Chaturvedi A, Kloos A, Göhring G, Schlegelberger B, Gaidzik VI, Bullinger L, Fiedler W, Heim A, Hamwi I, Eder M, Krauter J, Schlenk RF, Paschka P,

Döhner K, Döhner H, Ganser A, Heuser M.Blood. 2018 Sep 6. pii: blood-2018-02-829911. doi: 10.1182/blood-2018-02-829911.

2. Absence of FLT3 mutations in Iranian adult T-cell leukemia/lymphoma patients.Ayatollahi H, Sadeghian M, Kooshyar M, Shirdel A, Rahimi H, Jafarian A, Ghazaei S, Soltani N, Shams F, Motamedi Rad N, Shakeri S.Med J Islam Repub Iran. 2018 Jun 9;32:47. doi: 10.14196/mjiri.32.47. eCollection 2018.