

Product Information

ANTI-FLT-3, HUMAN

Developed In Goat, Affinity Isolated Antibody

Product Number **F 0550**

Product Description

Anti-Flt-3 is developed in goat using purified recombinant human Flt-3 extracellular domain, expressed in mouse NSO cells, as immunogen. The antibody is purified using human Flt-3 affinity chromatography.

Anti-Flt-3 recognizes recombinant human Flt-3 by ELISA and immunoblotting.

The Flt-3 (*fms*-like tyrosine kinase) receptor, also named Flk-2 (fetal liver kinase) and Stk-1 (stem cell tyrosine kinase) is a member of the class III subfamily of receptor tyrosine kinases.¹⁻⁵ Additional members of this receptor family are the receptors for macrophage-colony-stimulating factor, and steel factor, encoded by the *FMS*⁶⁻⁸ and *KIT*^{9,10} protooncogenes, respectively, and the receptors for α - and β -platelet-derived growth factors (PDGFRA and -B). Common structural features include the extracellular region composed of five immunoglobulin-like domains and an intracellular tyrosine kinase made up of an ATP-binding loop and a catalytic domain separated by a kinase insert domain.

Flt-3 is 130-155 kDa protein, expressed in various tissues, including placenta, gonads, and tissues of nervous and hematopoietic origin. The RTKs Flt3, Fms, and Kit play a key role in hematopoiesis by stimulating proliferation and/or differentiation of various hematopoietic cell types.^{11,12} Mice lacking a functional Flt3 receptor have normal mature hematopoietic populations; however, they exhibit reduced numbers of early B cell precursors and multipotent stem cells.¹³ The recently cloned Flt3 ligand (FL),¹⁴⁻¹⁶ in combination with other cytokines, stimulates proliferation of human and murine hematopoietic progenitor/stem cells *in vitro* as well as *in vivo*.¹⁴⁻²⁰ FL is a transmembrane protein with structural homology to M-CSF and SCF. FL also promotes growth of early B cell progenitor cells in combination with IL-7^{21,22} and induces adhesion of the precursor B cell line BaF3/Flt3 to fibronectin by activating the fibronectin receptors VLA-4 and VLA-5 integrins.²³

Reagents

Anti-Flt-3 is supplied lyophilized from a 0.2 μ m filtered solution of phosphate buffered saline. Endotoxin level is < 10 ng per mg antibody as determined by the LAL method.

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 μ m filtered PBS to produce a 0.1 mg/ml stock solution of antibody. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at -20 °C. Reconstituted product may be stored at 2-8 °C for at least one month. For prolonged storage, freeze in working aliquots at -20 °C. Avoid repeated freezing and thawing.

Product Profile

For indirect ELISA, a working concentration of 0.5-1.0 μ g/ml is determined to detect a limit of ~0.13 ng/well of recombinant human Flt-3.

For indirect immunoblotting, a working concentration of 0.1-0.2 μ g/ml is determined using human Flt-3 at 5 ng/lane under non-reducing and reducing conditions.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

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