Recombinant Human Flt-3 Ligand

Catalog Number PHC9414 (10 µg), PHC9415 (25 µg), PHC9411 (100 µg), PHC9413 (1 mg)

Pub. No. MAN0003500 **Rev.** A.0

Product specifications

Lot number	See product label.
Molecular weight	~30 kDa; migrates as a diffuse band on SDS-PAGE due to heterogeneous glycosylation.
Purity	>95% as determined by SDS PAGE analysis.
Amino acid sequence	TQDCSFQHSP ISSDFAVKIR ELSDYLLQDY PVTVASNLQD EELCGGLWRL VLAQRWMERL KTVAGSKMQG LLERVNTEIH FVTKCAFQPP PSCLRFVQTN ISRLLQETSE QLVALKPWIT RQNFSRCLEL QCQPDSSTLP PPWSPRPLEA TAPTAPQP
Biological activity	ED_{50} ≤5.00 ng/mL, determined by the dose dependent proliferation of human OCI-AML5 cells. Determine the optimal concentration for each specific application using an initial dose response assay.
Formulation	Lyophilized, carrier free.
Sterility	Filtered before lyophilization through a 0.22 micron sterile filter.
Endotoxin	<0.1 ng/µg
Production	Produced in Human Embryonic Kidney 293 cells and purified via sequential chromatography.
Reconstitution recommendation	Centrifuge the vial briefly, before opening to bring the contents to the bottom. Reconstitute the lyophilized protein in sterile, distilled water or appropriate buffered solution containing 0.1% BSA to regain full activity. Apportion the reconstituted protein into working aliquots and store at ≤ –20°C. Make any further dilutions of the reconstituted protein in buffered solution containing a carrier protein, such as PBS + 0.1% BSA.
Suggested working dilutions	The optimal concentration should be determined for each specific application.
Storage	Store the lyophilized protein at 2–8°C, preferably desiccated. Upon reconstitution, apportion into working aliquots and store at ≤ –20°C. Avoid repeated freeze-thaw cycles.
Expiration date	Expires one year from date of receipt when stored as instructed.
References	Dehmel, U, Zoborski, M, Meierhoff, G, Rosnet, O, Birnbaum, D, Ludwig, WD, Quentmeier, H, and Drexler, HG. (1996) Effects of Flt-3 ligand on human leukemia cells. I. Proliferative response of myeloid leukemia cells. Leukemia 10:261-270. Lisovsky, M, Estrov, Z, Zhang, X, Consoli, U, Sanchez-Williams, G, Snell, V, Munker, R, Goodacre, A, Savchenko, V, and Andreeff, M. (1996) Flt-3 ligand stimulates proliferation and inhibits apoptosis of acute myeloid leukemia cells: regulation of Bcl-2 and Bax. Blood 88:3987-3997. Lyman, SD. (1995) Biology of Flt-3 ligand and receptor. Int. J. Hematol. 62:63-73. Lyman, SD, James, L, Vanden Bos, T, de Vries, P, Brasel, K, Gliniak, B, Hollingsworth, LT, Picha, KS, McKenna, HJ, Splett, RR, et al. (1993) Molecular cloning of a ligand for the Flt-3/Flk-2 tyrosine kinase receptor: a proliferative factor for primitive hematopoietic cells. Cell 75:1157-1167. Lynch, DH, Andreasen, A, Maraskovsky, E, Whitmore, J, Miller, RE, and Schuh, JC. (1997) Flt-3 ligand induces tumor regression and antitumor immune responses in vivo. Nat. Med. 3:625-631. McKenna, HJ, de Vries, P, Brasel, K, Lyman, SD, and Williams, DE. (1994) Ligand for Flt-3/Flk-2 receptor tyrosine kinase regulates growth of hematopoietic stem cells and is encoded by variant RNAs. Nature 368:643-648. McKenna, HJ, deVries, P, Brasel, K, Lyman, SD, and Williams, DE. (1995) Effect of Flt-3 ligand on the *ex vivo* expansion of human CD34+ hematopoietic progenitor cells. Blood 86:3413-3420. Namikawa, R, Muench, MO, de Vries, JE, and Roncarolo, MG. (1996) The Flk-2/Flt-3 ligand synergizes with interleukin-7 promoting stromal-cell-independent expansion and differentiation of human fetal pro-B cells *in vitro*. Blood 87:1881-1890. Zhang, S, and Broxmeyer, HE. (2000) Flt-3 ligand induces tyrosine phosphorylation of gab1 and gab2 and their association with shp-2, grb2, and PI3 kinase. Biochem. Biophys. Res. Commun. 277:195-199.

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