Recombinant Human Interleukin–7 (IL–7)

Catalog Number PHC0075 (5 µg), PHC0076 (25 µg), PHC0071 (100 µg), PHC0073 (1 mg)

Pub. No. MAN0003413 **Rev.** 3.0

Product specifications

Lot number	See product label.
Molecular weight	17.5 kDa
Purity	>95% as determined by SDS PAGE analysis.
Amino acid sequence	DCDIEGKDGK QYESVLMVSI DQLLDSMKEI GSNCLNNEFN FFKRHICDAN KEGMFLFRAA RKLRQFLKMN STGDFDLHLL KVSEGTTILL NCTGQVKGRK PAALGEAQPT KSLEENKSLK EQKKLNDLCF LKRLLQEIKT CWNKILMGTK EH
Biological activity	ED_{50} 0.2–1 ng/mL (specific activity: 5.0 x 10^6 to 1.0 x 10^6 units/mg), determined by the dose dependent proliferation of human PBMCs. 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 *E. coli* 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 to 0.1–1.0 mg/mL 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 low endotoxin medium or buffered solution with FBS or tissue culture grade 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 (not in a frost-free freezer). Avoid repeated freeze-thaw cycles.
Expiration date	Expires one year from date of receipt when stored as instructed.
References	Ayyoub, M, Stevanovic, S, Sahin, U, Guillaume, P, Servis, C, Rimoldi, D, Valmori, D, Romero, P, Cerottini, JC, Rammensee, HG, Pfreundschuh, M, Speiser, D, and Levy, F. (2002) Proteasome-assisted identification of a SSX-2-derived epitope recognized by tumor-reactive CTL infiltrating metastatic melanoma. J. Immunol. 168(4):1717-1722. Butterfield, LH, Jilani, SM, Chakraborty, NG, Bui, LA, Ribas, A, Dissette, VB, Lau, R, Gamradt, SC, Glaspy, JA, McBride, WH, Mukherji, B, and Economou, JS. (1998) Generation of melanoma-specific cytotoxic T lymphocytes by dendritic cells transduced with a MART-1 adenovirus. J. Immunol. 161(10):5607-5613. Cosenza, L, Sweeny, E, and Murphy, JR. (1997) Disulfide bond assignment in human interleukin-7 by matrix-assisted laser desorption/ionization mass spectroscopy and site-directed cysteine to serine mutational analysis. J. Biol. Chem. 272(52):32995-33000. Frost, PA, Butterfield, LH, Dissette, VB, Economou, JS, and Bonavida, B. (2001) Immunosensitization of melanoma tumor cells to non-MHC Fas-mediated killing by MART-1-specific CTL cultures. J. Immunol. 166(5):3564-3573. Le, PT, Adams, KL, Zaya, N, Mathews, HL, Storkus, WJ, and Ellis, TM. (2001) Human thymic epithelial cells inhibit IL-15-and IL-2-driven differentiation of NK cells from the early human thymic progenitors. J. Immunol. 166(4): 2194-2201. Loparev, V, Parsons, J, Knight, J, Fanelli Panus, J, Ray, C, Buller, R, Pickup, D, and Esposito, J. (1998) A third distinct tumor necrosis factor receptor of orthopoxviruses. Proc. Nat'l. Acad. Sci. 95(7):3786-3791. Roth, MD, Cheng, QW, Harui, A, Basak, SK, Mitani, K, Low, TA, and Kiertscher, SM. (2002) Helper-dependent adenoviral vectors efficiently express transgenes in human dendritic cells but still stimulate antiviral immune responses. J. Immunol. 169(8):4651-4656.

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Explanation of Symbols

Symbol	Description	Symbol	Description	Symbol	Description
	Manufacturer	REF	Catalog number	LOT	Batch code
	Use by		Temperature limitation		
	Consult instructions for use		Caution, consult accompanying documents		

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