



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD127 Protein
Catalog Number: hRP-1803
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human interleukin-7 receptor subunit alpha (IL7R, also named as CD127) gene is a receptor for interleukin 7 (IL7). The function of this receptor requires the interleukin 2 receptor, gamma chain (IL2RG), which is a common gamma chain shared by the receptors of various cytokines, including interleukins 2, 4, 7, 9, and 15. This protein has been shown to play a critical role in V(D)J recombination during lymphocyte development. Defects in this gene may be associated with severe combined immunodeficiency (SCID). Alternatively spliced transcript variants have been found.

Full-length extracellular domain of human CD127 cDNA (21 - 239aa, derived from BC067537) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein was expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: CD127 (IL7R; IL7RA)
Accession Number: NP_002176
Species: Human
Size: 40 µg / Vial
Composition: 0.4 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Chandran SS, et al., *Tumor-Specific Effector CD8+ T Cells That Can Establish Immunological Memory in Humans after Adoptive Transfer Are Marked by Expression of IL7*



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Receptor and c-myc. Cancer Res. 75 (16), 3216-3226 (2015)

Leiding JW, et al., *Hypomorphic interleukin-7 receptor alpha-chain mutations and T-cell deficiency: a delay in diagnosis.* Ann. Allergy Asthma Immunol. 115 (1), 1-3 (2015)

Albareda MC, et al., *Perturbed T cell IL-7 receptor signaling in chronic Chagas disease.* J. Immunol. 194 (8), 3883-3889 (2015)

Applications

1. May be used for in vitro CD127 mediated IL7 and IL2 pathway regulation study for various cells, such as T cells, with this protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction mapping.
3. May be used as enzymatic substrate for various proteases.
4. Potential biomarker protein for monitoring CD8+T effector cell activation status in various diseases.
5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGFESGYAQNGLLEDAELDDYSFSCYSQLEVNGSQHSL
TCAFEDPDVNTTNLEFEICGALVEVKCLNFRKQLQEIYFIETKKFLLIGKSNICVKVGEKSLTCK
KIDLTTIVKPEAPFDLSVIYREGANDFVVTFTNTSHLQKKYVKVLMHDVAYRQEKDENKWTHVNL
SSTKLTLQKRLQPAAMYEIKVRSIPDHYFKGFWSEWSPSYFFRTPEINNSSGEMDP