



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD360 Protein
Catalog Number: hRP-1412
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human Cd360 gene is a cytokine receptor for interleukin 21 (IL21). It belongs to the type I cytokine receptors, and has been shown to form a heterodimeric receptor complex with the common gamma-chain, a receptor subunit also shared by the receptors for interleukin 2, 4, 7, 9, and 15. This receptor transduces the growth promoting signal of IL21, and is important for the proliferation and differentiation of T cells, B cells, and natural killer (NK) cells. The ligand binding of this receptor leads to the activation of multiple downstream signaling molecules, including JAK1, JAK3, STAT1, and STAT3. Knockout studies of a similar gene in mouse suggest a role for this gene in regulating immunoglobulin production.

Full-length extracellular domain of human CD360 cDNA (20 – 232 aa) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is 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: CD360 (IL21R, NILR)
Accession Number: NP_068570.1
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Ives ML, et al., *Signal transducer and activator of transcription 3 (STAT3) mutations underlying autosomal dominant hyper-IgE syndrome impair human CD8(+) T-cell memory*



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formation and function. J. Allergy Clin. Immunol. 132 (2), 400-411 (2013)

Vallieres F et al., *IL-21 enhances phagocytosis in mononuclear phagocyte cells: identification of spleen tyrosine kinase as a novel molecular target of IL-21.* J. Immunol. 190 (6), 2904-2912 (2013)

Kotlarz D, et al., *Loss-of-function mutations in the IL-21 receptor gene cause a primary immunodeficiency syndrome.* J. Exp. Med. 210 (3), 433-443 (2013)

Asao H, et al., *Cutting edge: the common gamma-chain is an indispensable subunit of the IL-21 receptor complex.* J. Immunol. 167 (1), 1-5 (2001)

Applications

1. May be used for in vitro non-glycosylated CD360 protein mediated T cell activations regulation study with this protein as either coating matrix protein or soluble factor.
2. May be used for CD360 protein-protein interaction assay.
3. As enzymatic substrate for various proteases.
4. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGFPCPDLVICYTDYLQTVICILEMWNLHPSTLTLTWQDQ
YEELKDEATSCSLHRSAHNATHATYTCHMDVHFHMADDIFSVNITDQSGNYSQECGSFLLAESI
KPAPPFNVTVTFSGQYNISWRSDYEDPAFYMLKGKLYELQYRNRGDPWAVSPRRKLISVDSRS
VSLPLEFRKDSSELQVRAGPMPGSSYQGTWSEWSDPVIFQTQSEELKE