



LD Biopharma, Inc.
7384 Trade Street, Suite B
San Diego, CA 92121
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human LILRB4 Protein
Catalog Number: hRP-2657
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human leukocyte immunoglobulin-like receptor subfamily B member 4: LILRB4 (also named as CD85k) gene is a receptor for class I MHC antigens. It recognizes a broad spectrum of HLA-A, HLA-B, HLA-C and HLA-G alleles. LILRB4 is involved in the down-regulation of the immune response and the development of tolerance, e.g. towards transplants. It interferes with TNFRSF5-signaling and NF-kappa-B up-regulation. It also inhibits receptor-mediated phosphorylation of cellular proteins and mobilization of intracellular calcium ions. Recent data indicated that LILRB4 may be a novel target for AML CAR-T therapeutic development.

Full-length extracellular domain of human LILRB4 cDNA (22 – 259aa) was constructed with codon optimization gene synthesis and expressed with a human N-terminalT7-His-TEV cleavage site Tag (29aa) fusion. 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:	LILRB4	(CD85k, ILT3; LIR5)
Accession Number:	NP_001265355	
Species:	Human	
Size:	30 µg / Vial	
Composition:	0.3 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.	
Storage:	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.	

Key References

John S., et al., **A Novel Anti-LILRB4 CAR-T Cell for the treatment of Monocytic AML.** Mol Ther. Oct3: 26(10): 2487-2495. (2018)



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Liu J, et al., *Expression of ILT3 predicts poor prognosis and is inversely associated with infiltration of CD45RO+ T cells in patients with colorectal cancer*. *Pathol. Res. Pract.* 214 (10), 1621-1625 (2018)

Zurli V, et al., *Ectopic ILT3 controls BCR-dependent activation of Akt in B-cell chronic lymphocytic leukemia*. *Blood* 130 (18), 2006-2017 (2017)

Applications

1. May be used for in vitro LILRB4 mediated lymphocyte activities regulation study with this protein either as soluble factor or as coating matrix protein.
2. May be used for LILRB4 protein-protein interaction assay.
3. Potential therapeutic protein, which may be used as CAR-T target for AML.
4. As native human LILRB4 immunogen for specific antibody production.

Quality Control

Purity: > 93 % by SDS-PAGE.

Recombinant Human LILRB4 Extracellular Domain Protein (29.6 kD)

MASMTGGQQMGRGHHHHHENLYFQGGEFQAGPLPKPTLWAEPGSVISWGNSVTIWCQGTLEAR
EYRLDKEESPAPWDRQNPLEPKNKARFSIPSMTEDYAGRYRCYRSPVGWSQPSDPLELVMTGA
YSKPTLSALPSPLVTSKGKSVTLLCQSRSPMDTFLLIKERAAHPLLHLRSEHGAAQHQAEFPMS
VTSVHGGTYRCFSSHGFSHYLLSHPSDPLELIVSGSLEDPRPSPTRSVSTAAGPEDQPLMPTGS
VPHSGLRRHWE