



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human C4 γ Protein
Catalog Number: hRP-1414
Manufacturer: LD Biopharma, Inc.

Introduction

Human C4 (Total 1744aa) gene encodes the acidic form of complement factor 4, part of the classical activation pathway. The protein is expressed as a single chain precursor, which is proteolytically cleaved into a trimer of a, b, and g chains prior to secretion. The trimer provides a surface for interaction between the antigen-antibody complex and other complement components. Measurement of C4g chain protein concentration in blood sample may be beneficial for adjusting of treatment for Lupus patients.

Full-length human C4 gamma domain cDNA (1454 – 1744 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: C4g
Accession Number: NP_009224.2
Species: Human
Size: 50 μ g / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, 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

Kjaer TR, et al., *Toward a structure-based comprehension of the lectin pathway of complement*. Mol. Immunol. 56 (4), 413-422 (2013)

Perry AJ, et al., *A molecular switch governs the interaction between the human*



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complement protease C1s and its substrate, complement C4. J. Biol. Chem. 288 (22), 15821-15829 (2013)

Applications

1. May be used for in vitro human complement C4d mediated cancer cell resistant to complement-mediated damage pathway regulation study by using this protein as coating matrix protein or soluble factor.
2. May be used for protein-protein interaction assay.
3. Potential Diagnostic biomarker protein for tumors, such as lung cancer.
4. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGFEAPKVVEEQESRVHYTVCIWRNGKVGLSGMAIADV
TLLSGFHALRADLEKLTSLSDRYVSHFETEGPHVLLLYFDSVPTSRECVGFQVAVQVGLVQPA
SATLYDYNPERRCSVFGAPSKSRLATLCSAEVCQCAEGKCPRQRALERGLQDEEDGYRMKF
ACYYPVEYGFQVKVLRSDSRAAFRLFETKITQVLHFTKDVKAAANQMRNFLVRASCRLRLEPG
KEYLIMGLDGATYDLEGHPQYLLDSNSWIEEMPSERLCRSTRQRAACAQLNDFLQEYGTQGCQV