



LD Biopharma, Inc.
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD47 Protein
Catalog Number: hRP-1219
Manufacturer: LD Biopharma, Inc.

Introduction

Human CD47 gene encodes a five trans-membrane domain membrane protein, which is involved in the increase in intracellular calcium concentration that occurs upon cell adhesion to extracellular matrix. The longest extracellular domain of CD47, carry a single Ig-like V type domain. The CD47 is also a receptor for the C-terminal cell-binding domain of thrombospondin, and it may play a role in membrane transport and signal transduction. This gene has broad tissue distribution, and is reduced in expression on Rh erythrocytes. Recent data indicated that various cancer cell over-expression of CD47 as “don’t eat me” signal for escaping phagocytosis in vivo. Blocking CD47 might be a specific targeting strategy for cancer immunotherapy.

Full-length extracellular domain of human CD47, which carry single Ig-like V type domain cDNA (19 – 127 aa, derived from BC012884) 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: CD47 (TAP, MER6, OA3)
Accession Number: NP_001768.1
Species: Human
Size: 50 µg / Vial
Composition: 0.5 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.



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Key References

Tseng,D., et al.,*Anti-CD47 antibody-mediated phagocytosis of cancer by macrophages primes an effective antitumor T-cell response*. Proc. Natl. Acad. Sci. U.S.A. 110 (27), 11103-11108 (2013)

Lascorz,J., et al., *Association study identifying polymorphisms in CD47 and other extracellular matrix pathway genes as putative prognostic markers for colorectal cancer*. Int J Colorectal Dis 28 (2), 173-181 (2013)

Applications

1. May be used for in vitro non-glycosylated CD47 longest extracellular domain protein mediated “don’t eat me” signal regulation study for cancer cell migration, T cell activation et al. with this protein as either coating matrix protein or soluble factor.
2. May be used as CD47 protein-protein interaction assay.
3. As enzymatic substrate for various proteases.
4. As potential cancer diagnostic biomarker protein.
5. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFQLLFNKTKSVEFTFCNDTVVIPCFTVNMEAQNTTE
VYVKWKFGRDIYTFDGLNKSTVPTDFSSAKIEVSQLLKGDASLKMDKSDAVSHTGNYTCEVT
ELTREGETII