



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 CD2 Protein  
**Catalog Number:** hRP-0384  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

CD2 is a surface antigen of the human T-lymphocyte lineage that is expressed on all peripheral blood T cells. It is one of the earliest T-cell markers, being present on more than 95% of thymocytes; it is also found on some natural killer cells but not on B lymphocytes. Monoclonal antibodies directed against CD2 inhibit the formation of rosettes with sheep erythrocytes, indicating that CD2 is the erythrocyte receptor or is closely associated with it. Recombinant CD2 protein could be serviced as coating matrix protein for study human T cells expansion in vitro.

Full-length extracellular domain of human CD2 gene (25 - 209 aa) was constructed with 31 N-terminal T7/His tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified. Coating this recombinant protein at 1-10 ug / well (6 well plate) in T cell specific medium can be used for human T cell differentiation study in vitro.

**Gene Symbol:** CD2  
**Accession Number:** NP\_001758  
**Species:** Human  
**Size:** 100 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 -20°C for long term storage. Product is stable at 4 °C for at least 30 days.

### Key References

Schraven,B., et al. *Association of CD2 and CD45 on human T lymphocytes.* Nature 345



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(6270), 71-74 (1990)

Baecher-Allan, C.M., et al. *CD2 costimulation reveals defective activity by human CD4+CD25(hi) regulatory cells in patients with multiple sclerosis*. J. Immunol. 186 (6), 3317-3326 (2011)

Kim, E.O., et al. *Homotypic cell to cell cross-talk among human natural killer cells reveals differential and overlapping roles of 2B4 and CD2*. J. Biol. Chem. 285 (53), 41755-41764 (2010)

## Applications

1. Protein can be used as coating matrix protein for study human T cell differentiation in vitro.
2. As highly purified recombinant antigen, it may be used as culture matrix protein for regulation of T cell function study in vitro.

## Quality Control

1. Purity: > 90% by SDS-PAGE.
2. Functional Test: Not tested yet.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFELKEITNALETWGALGQDINLDIPSFQMSDDIDDI  
KWEKTSDDKKIAQFRKEKETFKKDYKLFKNGTLKIKHLKTDDQDIYKVSIIYDTKGKNVLEKI  
FDLKIQERVSKPKISWTCINTTLTCEVMNGTDPELNLYQDGKHLKLSQRVITHKWTTSLSAKFK  
CTAGNKVSKESSVEPVSCPEKGLD