



**LD Biopharma, Inc.**  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human CD270 Protein  
**Catalog Number:** hRP-0490  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

The protein encoded by human tumor necrosis factor receptor superfamily member 14 (TNFRSF14, CD270) gene is a member of the TNF-receptor superfamily. This receptor was identified as a cellular mediator of herpes simplex virus (HSV) entry. Binding of HSV viral envelope glycoprotein D (gD) to this receptor protein has been shown to be part of the viral entry mechanism. The cytoplasmic region of this receptor was found to bind to several TRAF family members, which may mediate the signal transduction pathways that activate the immune response.

Recombinant human CD270 extracellular domain cDNA (39 - 202 aa) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal 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 5-10 ug / well (6 well plate) in a specific culture medium may be used for human T and B cell cells activation/differentiation study in vitro.

**Gene Symbol:** CD270 (TNFRSF14; ATA; HVEA; TR2; LIGHTR)  
**Accession Number:** NP\_003811.2  
**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.



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## Key References

Montgomery, R.I., *Herpes simplex virus-1 entry into cells mediated by a novel member of the TNF/NGF receptor family*. Cell 87 (3), 427-436 (1996)

Kwon, B.S., et al., *A newly identified member of the tumor necrosis factor receptor superfamily with a wide tissue distribution and involvement in lymphocyte activation*. J. Biol. Chem. 272 (22), 14272-14276 (1997)

Schaer, C., et al., *HVEM signalling promotes colitis*. PLoS ONE 6 (4), E18495 (2011)

## Applications

1. Protein can be used as coating matrix protein for human T or B cell functions and differentiation regulation study in vitro.
2. As potential biomarker protein for infectious diseases and auto-immune disease diagnostic development.
3. As antigen for specific antibody production.

## Quality Control

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

## Suggested Coating Protocol

Standard coating was performed using 1ml PBS / well, which contains 5-10 ug protein / well) for incubating at 4°C overnight. After coating, remove PBS solution, the plate is ready for cell culture study.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQG<sup>^</sup>GEFLPSCKEDEYYPVGSECCPKCSPGYRVKEACGELTG  
TVCEPCPPGTYYIAHLNGLSKCLQCQMCDPAMGLRASRNC SR TENAVCGCSPGHFCIVQGDHCA  
ACRAYATSSPGQRVQKGGTESQDTLQCNCPPGTFSPNGTLEECQHQTCKSWLVTKAGAGTSSSH  
WV