



**LD Biopharma, Inc.**  
9924 Mesa Rim Road Suite B  
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Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human CD67 Protein  
**Catalog Number:** hRP-0588  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human CD67 (CD66b; CEACAM8) is a single chain GPI-anchored glycoprotein and is a member of the Ig superfamily, more specifically the human carcinoembryonic Ag (CEA) family. CEAs are widely used as colorectal carcinoma tumor markers but are expressed in normal tissues and during fetal development. Indeed, CD67 is exclusively expressed on human granulocytes and is recognized as a granulocyte “activation marker”. However, the functions of this molecule are largely unknown in eosinophils. Under normal conditions, neutrophils have minimal expression of CD67, but incubation in vitro with inflammatory agonists, such as fMLP, rapidly increases this expression. Furthermore, expression of CD67 in eosinophils is enhanced in vivo in patients with a helminth infection, specifically with *Schistosoma mansoni*. The eosinophil expression of CD67 is also enhanced in vitro by incubation with activated lymphocytes. Interestingly, no homologue for CD67 has been identified in the mouse, suggesting that there may be strong selection pressure during the evolution of the CEA family molecules. Recent data indicated that high-expression of LD67 could potentially serve as diagnostic biomarker for primary myelofibrosis.

Full-length recombinant human CD67 extracellular domain cDNA (35 - 320 aa, derived from BC026263) 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.

**Gene Symbol:** CD67 (CD66b; CEACAM8; CGM6; NCA-95)  
**Accession Number:** NP\_001807  
**Species:** Human  
**Size:** 100 µg / Vial  
**Composition:** 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.



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**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

## Key References

Eades-Perner, A.M., et al., *Mice transgenic for the human CGM6 gene express its product, the granulocyte marker CD66b, exclusively in granulocytes.* Blood 91 (2), 663-672 (1998)

Ordonez, C., et al., *GPI-anchored CEA family glycoproteins CEA and CEACAM6 mediate their biological effects through enhanced integrin alpha5beta1-fibronectin interaction.* J. Cell. Physiol. 210 (3), 757-765 (2007)

Yoon, J., et al., *CD66b regulates adhesion and activation of human eosinophils.* J. Immunol. 179 (12), 8454-8462 (2007)

Hasselbalch, H.C., et al., *High expression of carcinoembryonic antigen-related cell adhesion molecule (CEACAM) 6 and 8 in primary myelofibrosis.* Leuk. Res. 35 (10), 1330-1334 (2011)

## Applications

1. May be used coating matrix protein for in vitro granulocytes differentiation regulations study.
2. May be used for protein-protein interaction assay development.
3. Potential diagnostic biomarker protein for acute myelofibrosis.
4. As antigen for specific antibody production.

## Quality Control

1. Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEQLTIEAVPSNAAEGKEVLLLVHNLPPQDPRGYNWYKG  
ETVDANRRIIGYVISNQQITPGPAYSNRETIYPNASLLMRNVTRNDTGSYTLQVIKLNLMSEEV  
TGQFSVHPETPKPSISSNNSNPVEDKDAVAFTCEPETQNTTYLWVWNGQSLPVSRLQLSNGNR  
TLTLLSVTRNDVGPYECEIQNPASANFSDPVTLLNVLYGPDAPTISPSDTYYHAGVNLNLSCHAA  
SNPPSQYSWSVNGTFQQYTQKLFIPNITTKNSGSYACHTTNSATGRNRRTTVRMITVSD