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Datasheet for 009-001-U68-0010

# rHuman CD40 Ligand Protein

## Overview

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|---|---|
| **Description:** | Human CD40 Ligand Recombinant Protein - 009-001-U68-0010 |
| **Item No.:** | 009-001-U68-0010 |
| **Size:** | 10 µg |
| **Applications:** | SDS-PAGE, Cellular Assay |
| **Origin:** | Human |
| **Expressed in:** | E. coli |

## Product Details

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| **Background:** | CD40 Ligand (CD40-L), or CD154, is a membrane glycoprotein and differentiation antigen expressed on the surface of T cells. The CD40 Ligand stimulates B cell proliferation and secretion of all immunoglobulin isotypes in the presence of cytokines. CD40 Ligand has been shown to induce cytokine production and tumoricidal activity in peripheral blood monocytes. It also co-stimulates proliferation of activated T cells and this is accompanied by the production of IFN-gamma, TNF-α, and IL-2. Recombinant human CD40 Ligand is a non-glycosylated protein, containing 149 amino acids, with a molecular weight of 16.3 kDa. |
| **Synonyms:** | TNFSF5, TRAP, CD154, gp39, T-BAM |
| **Species of Origin:** | Human |
| **Expressed in:** | E. coli |
| **Type:** | Recombinant Protein |
| **Low Endotoxin:** | Yes |

## Target Details

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| **Gene Name:** | CD40LG |
| **Purity/Specificity:** | CD40 Ligand purity was determined to be greater than 98% as determined by analysis by HpLC, UV-Spectroscopy at 280nm, and by reducing and non-reducing SDS-pAGE. |
| **Relevant Links:** | • UniProtKB - P29965 |

## Application Details

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| **Tested Applications:** | SDS-PAGE |
| **Suggested Applications:** | Cellular Assay (Based on references) |
| **Application Note:** | CD40 Ligand Recombinant Protein has been tested by SDS-PAGE and biological assay and is suitable as a control for polyclonal or monoclonal anti-CD40 Ligand in immunological assays. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **Other:** | Endotoxin Level: Measured by kinetic LAL analysis and is typically ≤ 1 EU/µg protein. Biologic Activity: The activity is tested by HEK-blue ™ CD40L Activity. Acceptable Level <50ng/mL, >2.0x10^4 units/mg. Additionally testing by ELISA: IL-8 production by human PBMCs. |

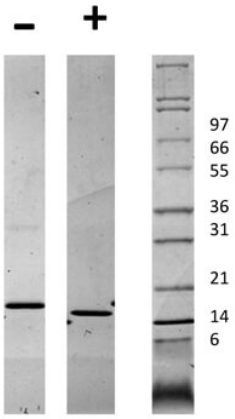
## Formulation

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|---|---|
| **Physical State:** | Lyophilized |
| **Buffer:** | 0.01 M Sodium Phosphate, pH 7.5 |
| **Preservative:** | None |
| **Stabilizer:** | None |
| **Reconstitution Volume:** | 10µl (10-100µl) |
| **Reconstitution Buffer:** | Restore with deionized water (or equivalent) |

## Shipping & Handling

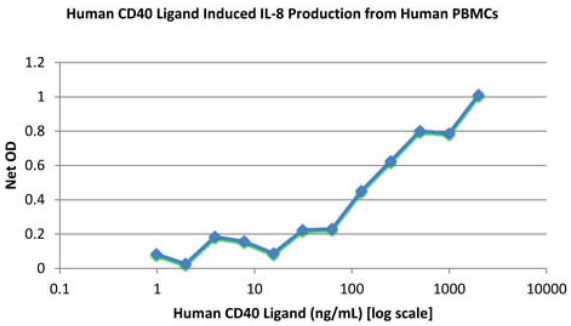
| | |
|---|---|
| **Shipping Condition:** | Ambient |
| **Storage Condition:** | Store vial at 4° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL). For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature. |
| **Expiration:** | Expiration date is six (6) months from date of receipt. |

## Images




**SDS-PAGE**

SDS-PAGE of Human CD40 Ligand Recombinant Protein. Lane 1: 1 µg Human CD40 Ligand in non-reducing conditions (-). Lane 2: 1 µg Human CD40 Ligand in reducing conditions (+). Lane 3: Molecular weight marker. Human CD40 Ligand has a predicted MW of 16.3 kDa.




**SDS-PAGE**

Bioactivity of Human CD40 Ligand Recombinant Protein. Serial dilutions of Human CD40 Ligand, starting at 2000 ng/mL, were added to human PBMCs. After 48 hours, cell supernatant was collected and human IL-8 was measured via ELISA and the linear portion of the curve was us used to calculate the ED50. The ED50 of Human CD40 Ligand is 50-75 ng/mL.

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.