
**Recombinant Human
CD40 Ligand ACF**



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Recombinant Human CD40 Ligand ACF

Catalog No. 95104

INTENDED USE

Recombinant Human CD40 Ligand ACF is a carrier-free, animal component-free bioactive recombinant growth factor intended for use in cell culture applications. CD40 ligand is a mitogenic factor involved in cell proliferation and differentiation of B lymphocytes.

PRODUCT DESCRIPTION

1. Synonyms

TNFSF5, TRAP, CD154, gp39, T-BAM, CD40L

2. Accession Number

P29965

3. Background

CD40 ligand is a type II transmembrane glycoprotein expressed on the surface of T cells. CD40 ligand is a member of the TNF receptor family of proteins and is expressed predominantly on activated CD4+ T cells, activated B cells, and platelets. It binds to CD40 on antigen presenting cells and leads to profound effects depending on the target cell. CD40 ligand stimulates B cell proliferation and secretion of all immunoglobulin isotypes in the presence of cytokines. It can co-stimulate the proliferation of activated T cells, which is accompanied by the production of IFN- γ , TNF- α , and IL-2. CD40 ligand has also been shown to induce cytokine production and tumoricidal activity in peripheral blood monocytes. Recombinant Human CD40 Ligand ACF is a non-glycosylated protein, containing 149 amino acids, with a molecular weight of 16.3 kDa.

4. Specifications

Formulation

Recombinant Human CD40 Ligand ACF is lyophilized from 10mM Na₂PO₄, pH 7.5.

Protein content and Purity

≥98% determined by HPLC, reducing and non-reducing SDS-PAGE analysis, UV spectroscopy at 280nm.

Bioactivity

ED₅₀ is determined by a dose-dependent proliferation of B cells from human PBMCs in the presence of IL-4. The ED₅₀ is typically 0.5-1.5 μ g/mL.

Quality and Grade

Carrier-free. Animal component-free.

SHIPPING

This product is shipped at ambient temperature. Immediately upon receipt, store at the recommended temperature below.

STORAGE INSTRUCTIONS AND STABILITY

Upon receipt, store the lyophilized protein at or below -10°C in a manual defrost freezer for up to 12 months from the date of receipt. Unopened vials are stable for one year from the date of receipt when stored as recommended. Reconstituted material should be apportioned in working volumes and stored at or below -10°C in manual defrost freezer. Reconstituted material is stable for 4-6 weeks when stored at or below -10°C and for 3-12 months at -80°C. Stability can be increased by adding at least 0.1% carrier protein.

PRECAUTIONS AND WARNINGS

This product is for research or further manufacturing use only. It is not for use in diagnostic procedures. The safety and efficacy of this product in diagnostic or other clinical procedures has not been established.

DIRECTIONS FOR USE

1. Reconstitution

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/mL, which can be further diluted into other aqueous solutions.

2. Optimum concentration

The optimum concentration varies depending on cell type and culture conditions. Working concentration should be determined for each specific application.

REFERENCES

1. Elgueta RE, Benson MJ, de Vries VC, Wasiuk A, Guo Y, and Noelle RJ (2009) Molecular Mechanism and Function of CD40/CD40L Engagement in the Immune System. *Immunol.* 229(1): 152-172.
2. Spriggs MK, Armitage RJ, Strockbine L, Ky N, Macduff BM, Sato TA, Maliszewski CR, and Fanslow WC (1992) Recombinant Human CD40 Ligand Stimulates B Cell Proliferation and Immunoglobulin E Secretion. *JEM.* 176: 1453-1550.