Alexa Fluor™ 647-Labeled Human CD40 Protein, Fc Tag (Site-specific conjugation)

Catalog # CD0-HA256

Synonym

CD40,Bp50,CDW40,MGC9013,TNFRSF5,p50

Source

Alexa Fluor 647-Labeled Human CD40 Protein, Fc Tag (CD0-HA256) is produced via site-specific conjugation of AF647 to Human CD40 Protein, Fc Tag under optimal conditions with a proprietary technology. Alexa Fluor 647-Labeled Human CD40 Protein, Fc Tag is expressed from human 293 cells (HEK293). It contains AA Glu 21 - Arg 193 (Accession # P25942-1).
Predicted N-terminus: Glu 21

Molecular Characterization

CD40(Glu 21 - Arg 193) P25942-1	Fc(Pro 100 - Lys 330) P01857

This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 47.1 kDa.

Conjugate

AF647

Excitation Wavelength: 640 nm

Emission Wavelength: 672 nm

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with AF647 using standard chemical labeling method. The residual AF647 is removed by molecular sieve treatment during purification process.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 0.5% BSA, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

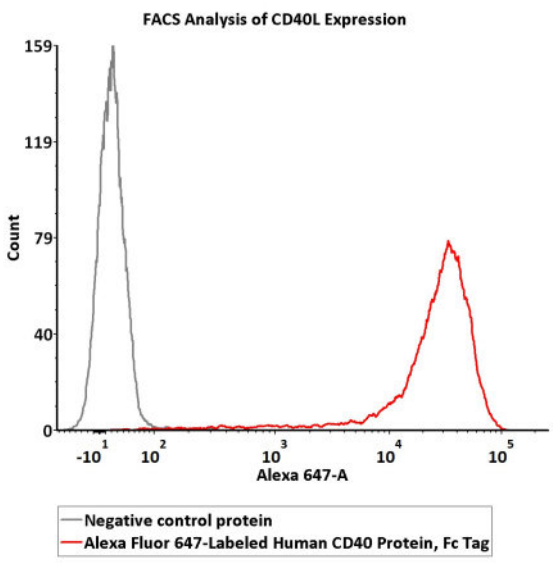
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please protect from light and avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

Bioactivity-FACS



5e5 of 293T-CD40L cells were stained with 100 μL of 1:25 dilution (4 μL stock solution in 100 μL FACS buffer) of Alexa Fluor 647-Labeled Human CD40 Protein, Fc Tag (Cat. No. CD0-HA256) and negative control protein

respectively. Alexa 647 signal was used to evaluate the binding activity (QC tested).

Background

CD40 is also known as TNFRSF5, Bp50, CDW40, MGC9013, TNFRSF5 and p50, is a member of the TNF receptor superfamily which are single transmembrane-spanning glycoproteins, and plays an essential role in mediating a broad variety of immune and inflammatory responses including T cell-dependent immunoglobulin class switching, memory B cell development, and germinal center formation. CD40 is a costimulatory protein found on antigen presenting cells and is required for their activation. The binding of CD154 (CD40L) on TH cells to CD40 activates antigen presenting cells and induces a variety of downstream effects. CD40 contains 4 cysteine-rich repeats in the extracellular domain, and is expressed in B cells, dendritic cells, macrophages, endothelial cells, and several tumor cell lines. The extracellular domain has the cysteinerich repeat regions, which are characteristic for many of the receptors of the TNF superfamily. Interaction of CD40 with its ligand, CD40L, leads to aggregation of CD40 molecules,which in turn interact with cytoplasmic components to initiate signaling pathways. Early studies on the CD40-CD40L system revealed its role in humoral immunity. Defects in CD40 result in hyper-IgM immunodeficiency type 3 (HIGM3), an autosomal recessive disorder characterized by an inability of B cells to undergo isotype switching, as well as an inability to mount an antibody-specific immune response, and a lack of germinal center formation.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.