

Fc-h4-1BBL

Soluble human 4-1BBL fused to an IgG1 Fc domain

Cat. code: fc-h41bb1

<https://www.invivogen.com/cd137l-4-1bbl-fc>

For research use only

Version 24D23-NJ

PRODUCT INFORMATION

Contents:

- 50 µg of lyophilized Fc-h4-1BBL protein
- 1.5 ml endotoxin-free water

Protein construction:

Codon-optimized human 4-1BBL N-terminal extracellular domain [A50-E254] with an N-terminal human IgG1 Fc-tag

Accession sequence: NM_003811.3 (native sequence)

Species: Human

Source: Chinese hamster ovary (CHO) cells

Tag: N-terminal human IgG1 Fc

Total protein size: 205 a.a. (secreted form)

Molecular weight: ~ 50 kDa (SDS-PAGE)

Purification: Protein G affinity chromatography

Purity: >91% (SDS-PAGE)

Formulation:

0.2 µm filtered solution in sodium phosphate buffer with glycine, saccharose and stabilizing agents

Storage:

- Product is shipped at room temperature. Store lyophilized Fc-h4-1BBL at -20°C. Lyophilized product is stable for at least 1 year.
- Reconstituted Fc-h4-1BBL is stable for 1 month when stored at 4°C and for 1 year when stored at -20°C. Avoid repeated freeze-thaw cycles.

Quality control:

- The size and purity of the protein is confirmed by SDS-PAGE.
- Fc-h4-1BBL is validated by flow cytometry using Jurkat-Lucia™ h4-1BB cells, and by ELISA using an anti-h4-1BBL monoclonal antibody (mAb). The potency of Fc-h4-1BBL at triggering intracellular signaling is validated using Jurkat-Lucia™ h4-1BB cells.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) is confirmed using HEK-Blue™ TLR2 and TLR4 cellular assays.

PRODUCT DESCRIPTION

Fc-h4-1BBL is a soluble human 4-1BBL chimera protein generated by fusing the N-terminal extracellular domain of human 4-1BBL (aa 50-254) to the C-terminus of a human IgG1 Fc domain with a cleavable TEV (Tobacco Etch Virus) sequence linker. Thus, depending on your applications, the IgG1 Fc domain can be removed using the TEV protease. Fc-h4-1BBL has an apparent molecular weight of ~50 kDa on an SDS-PAGE gel. It is expressed in CHO cells and purified by protein G affinity chromatography.

BACKGROUND

4-1BBL (CD137L) is a member of the TNFR family known as the ligand for 4-1BB (CD137 or TNFSF9). The interaction of 4-1BBL on antigen-presenting cells with 4-1BB on T cells enhances T cell activation, proliferation, and survival¹. The co-stimulation *via* 4-1BB activation mediates strong effector T cell immune responses, as well as generation of memory cells¹. The 4-1BB/4-1BBL pair is considered as a stimulatory immune checkpoint and has been an attractive target for cancer immunotherapy^{1,2}.

1. Bartkowiak, T. & Curran, M.A. 2015. 4-1BB Agonists: Multi-Potent Potentiators of Tumor Immunity. *Front Oncol* 5, 117. **2. Ascierto, P.A. et al., 2010.** Clinical experiences with anti-CD137 and anti-PD1 therapeutic antibodies. *Semin Oncol* 37, 508-516.

APPLICATIONS

Fc-h4-1BBL can be used for:

- Screening of high-affinity anti-human 4-1BBL monoclonal antibodies (mAbs) by ELISA
 - Screening of anti-human 4-1BB mAbs using competition assays.
- The optimal working concentration of Fc-h4-1BBL must be determined empirically for a given set of experimental conditions.

METHODS

Fc-h4-1BBL resuspension (100 µg/ml)

Note: Ensure you see the lyophilized pellet before resuspension.

- Add 500 µl of endotoxin-free water to the 50 µg vial and gently pipette until completely resuspended. Do not vortex.
- Prepare aliquots and store at -20°C or 4°C.

RELATED PRODUCTS

Product	Cat. Code
Jurkat-Raji 4-1BB/4-1BBL assay	rajkt-41bb
Jurkat 4-1BB/4-1BBL assay	jktl-41bb
Jurkat-Raji PD-1/PD-L1 assay	rajkt-hpd1
hPD1-Fc	fc-hpd1
hPD-L1-Fc	fc-hpdl1

TECHNICAL SUPPORT

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