

hCD80-Fc

Soluble human CD80 fused to an IgG1 Fc domain

Catalog # fc-hcd80

<http://www.invivogen.com/hcd80-fc>

For research use only, not for diagnostic or therapeutic use

Version # 17L04-MM

PRODUCT INFORMATION

Content:

- 50 µg lyophilized hCD80-Fc
- 1.5 ml endotoxin-free water

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 hCD80-Fc at -20 °C. Product is stable for at least 1 year.
- Reconstituted hCD80-Fc 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

- This product has been validated for flow cytometry.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

DESCRIPTION

hCD80-Fc is a soluble human CD80 fusion protein generated by fusing the N-terminal extracellular domain of human CD80 (aa 35-238) to the N-terminus of an engineered human IgG1 Fc domain with a 2 amino acid linker. hCD80-Fc has an apparent molecular weight of ~68 kDa on SDS-PAGE. hCD80-Fc is expressed in CHO cells and purified by protein G affinity chromatography.

BACKGROUND

Cluster of differentiation 80 (CD80), also known as B7-1, is a member of the B7 family of immunoregulatory proteins. It is expressed on antigen-presenting cells (APCs) and is essential for T cell activation. It binds the T cell critical costimulatory molecule CD28 and the inhibitory receptor CTLA-4 (also known as CD152). Binding of CD80 to CD28 evokes a costimulatory signal essential for T-lymphocyte activation, T-cell proliferation and cytokine production whilst binding to CTLA-4 has the opposite effect and inhibits T-cell activation.

1. Collins M. *et al.*, 2005. The B7 family of immune-regulatory ligands. *Genome Biol.* 6(6):223. 2. Spigel D. *et al.*, 2013. Clinical activity, safety, and biomarkers of MPDL3280A, an engineered PD-L1 antibody in patients with locally advanced or metastatic non-small cell lung cancer (NSCLC) [ASCO abstract 8008]. *J Clin Oncol.* 31(15)(suppl). 3. Herbst RS. *et al.*, 2014. Predictive correlates of response to the anti-PD-L1 antibody MPDL3280A in cancer patients. *Nature.* 515(7528):563-7.

METHOD

Preparation of stock solution (100 µg/ml)

- Add 500 µl of endotoxin-free water (provided) water to the 50 µg vial.
- Mix by pipetting. Do not vortex.

APPLICATIONS

hCD80-Fc can be used for flow cytometry (as described below) and for protein-protein binding assays. It may also be used to activate T cells by binding human CD28 or to block Treg cellular activity by binding to human CTLA-4. The optimal working concentration of hCD80-Fc must be determined empirically for a given set of experimental conditions.

Flow cytometry

hCD80-Fc was used at 1 µg for 5 x 10⁵ cells with a PE mouse anti-human IgG-Fc secondary antibody for indirect immunofluorescence staining of human CTLA-4-expressing cells by flow cytometry.

RELATED PRODUCTS

Product	Catalog Code
Anti-hCTLA4-hIgG1	hctla4-mab1
Anti-hCTLA4-hIgG1 fut	hctla4-mab13
Anti-hCTLA4-hIgG4 (S228P)	hctla4-mab14
Anti-hCTLA4-hIgA2	hctla4-mab7

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