

# Anti-mCTLA4-mIgG2a InvivoFit™

9D9-derived recombinant mouse monoclonal antibody against murine CTLA-4

Catalog code: mctla4-mab10-1, mctla4-mab10-10, mctla4-mab10-50

<https://www.invivogen.com/anti-mctla4-migg2a-invivofit>

For research use only, not for diagnostic or therapeutic use

Version 21I13-EG

## PRODUCT INFORMATION

### Contents:

Anti-mCTLA4-mIgG2a InvivoFit™, purified monoclonal antibody (mAb), provided azide-free and lyophilized. It is available in two pack sizes:

- 1 mg
- 10 mg
- 50 mg (5 x 10 mg)

**Target:** Murine cytotoxic T-lymphocyte-associated protein 4 (mCTLA-4)

**Clone:** 9D9-derived

**Sequence:** 100 % of mouse origin (constant and variable region)

**Source:** Chinese hamster ovary (CHO) cells

**Isotype:** Murine IgG2a (mIgG2a)

**Light chain type:** Kappa

**Purification:** Affinity chromatography with protein A

**Formulation:** 0.2 µm filtered solution in 150 mM sodium chloride, 20 mM sodium phosphate buffer with 5% saccharose

**Administration:** Suitable for parenteral delivery in mice

**Tested applications:** ELISA

### Antibody resuspension (2 mg/ml)

*Note: Ensure you see the lyophilized pellet before resuspension.*

Resuspend Anti-mCTLA4-mIgG2a InvivoFit™ with sterile water:

- Add 500 µl to 1 mg
- Add 5 ml to 10 mg

### Storage and stability

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

### Quality control

- Binding of Anti-mCTLA4-mIgG2a InvivoFit™ to mCTLA-4 has been confirmed using ELISA.
- The complete sequence of this antibody has been verified.
- <5% aggregates (confirmed by size exclusion chromatography).
- Anti-mCTLA4-mIgG2a InvivoFit™ is guaranteed sterile and its endotoxin level is <1 EU/mg (determined by the LAL assay).

## BACKGROUND

The cytotoxic T-lymphocyte-associated protein 4 (CTLA-4, also known as CD152) is an inhibitory receptor expressed on activated T lymphocytes. T-cell activation requires two signals. Signal 1 is delivered upon interaction of the T cell receptor (TCR) with antigenic peptides bound to major histocompatibility complex (MHC) molecules on antigen-presenting cells (APCs). Signal 2 is delivered upon interaction of the co-stimulatory receptor CD28 with the B7 family ligands, B7-1 (CD80) and B7-2 (CD86), on APCs. CTLA-4 is an immune checkpoint molecule upregulated upon T cell activation. It exerts competitive binding to CD28 ligands, thereby preventing T-cell overstimulation. CTLA-4 blockade with monoclonal antibodies (mAbs) has been used to treat patients with metastatic melanoma<sup>1,2</sup>.

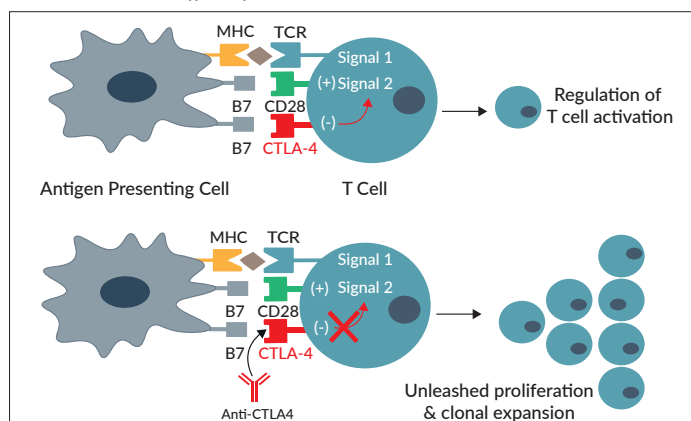
## DESCRIPTION

Anti-mCTLA4-mIgG2a InvivoFit™ is a recombinant mouse anti-mouse mAb designed for *in vivo* studies in mice. It features the variable region of the previously described anti-mCTLA-4 (9D9 clone) mAb<sup>2</sup> and a murine IgG2a isotype constant region. The anti-mCTLA-4 (9D9 clone) mAb blocks CTLA4-mediated negative signals that physiologically downregulate T cell activation, and thereby unleashes T cell activity<sup>2</sup>.

The 9D9 mAb, along with other commercially available anti-mCTLA4 mAbs, were generated in mice, and are therefore non-immunogenic in mice. However, these antibodies feature the IgG2b isotype which displays lower antitumor activity *in vivo* than the IgG2a isotype for this clone<sup>2</sup>. To overcome this issue, Anti-mCTLA4-mIgG2a InvivoFit™ was generated by recombinant technology and features the IgG2a constant region.

Anti-mCTLA4-mIgG2a InvivoFit™ is produced in CHO cells and purified by affinity chromatography with protein A.

Effect of Anti-CTLA4 on T cell activation.



1. Ribas A. & Wolchok J.D., 2018. Cancer immunotherapy using checkpoint blockade. *Science*. 359:1350-55. 2. Selby MJ. et al., 2013. Anti-CTLA-4 antibodies of IgG2a isotype enhance antitumor activity through reduction of intratumoral regulatory T cells. *Cancer Immunol Res.* 1(1):32-42.

## RELATED PRODUCTS

Product	Catalog Code
Anti-hCTLA4-hIgG1 (Ipilimumab)	hctla4-mab1
Anti-hCTLA4-hIgG1NQ (non-glycosylated)	hctla4-mab12
Anti-hCTLA4-hIgG1fut (non-fucosylated)	hctla4-mab13
Anti-hCTLA4-hIgG4 (S228P)	hctla4-mab14
Raji-hCTLA4 Cells	raji-hctla4

Other antibody isotype families are available, such as Anti-hCD20 and Anti-hPD1. For more information visit <https://www.invivogen.com/antibody-isotypes>.

### TECHNICAL SUPPORT

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