

Anti-hCTLA4-hIgA2

Monoclonal human IgA2 antibody against human CTLA-4

Catalog # hctla4-mab7

For research use only, not for diagnostic or therapeutic use

Version # 15D27-MM

PRODUCT INFORMATION

Content: 100 µg anti-hCTLA4-hIgA2, purified antibody, provided azide-free and lyophilized

Specificity: cytotoxic T-lymphocyte-associated protein 4 (CTLA-4)

Isotype: Human IgA2

Source: CHO cells

Formulation: 0.2 µm filtered solution in a sodium phosphate buffer with glycine, saccharose and stabilizing agents.

Antibody resuspension

Add 1 ml of sterile water to obtain a concentration of 0.1 mg/ml.

Storage

- 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 when stored at 4 °C and for 1 year when aliquoted and stored at -20 °C. Avoid repeated freeze-thaw cycles.

Quality control

- Binding of anti-hCTLA4-hIgA2 to human CTLA-4 has been tested using flow cytometry.

- The complete sequence of this antibody has been verified.

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

DESCRIPTION

Anti-hCTLA4-hIgA2 features the constant region of the human IgA2 isotype and the variable region of ipilimumab. Ipilimumab is a fully human IgA2 monoclonal antibody that targets CTLA-4 (also known as CD152), a negative regulator of T cell activation. By binding CTLA-4, ipilimumab inhibits negative signals that physiologically downregulate T cell activation and exerts its therapeutic activity by upregulating the antitumor activity of T lymphocytes^{1, 2}. In addition, Ipilimumab induces antibody-dependent cell-mediated cytotoxicity (ADCC) and TNF-α production³. Ipilimumab has been approved by the FDA for the treatment of unresectable or metastatic melanoma. Ipilimumab is undergoing clinical trials for other types of cancers, including lung cancer⁴.

Anti-hCTLA4-hIgA2 was generated by recombinant DNA technology. It has been produced in CHO cells and purified by affinity chromatography with peptide M.

1. **Grosso JF. & Jure-Kunkel MN., 2013.** CTLA-4 blockade in tumor models: an overview of preclinical and translational research. *Cancer Immun.* 13:5. 2. **Maio M. et al., 2013.** Update on the role of ipilimumab in melanoma and first data on new combination therapies. *Curr Opin Oncol.* 25(2):166-72. 3. **Laurent S. et al., 2013.** The engagement of CTLA-4 on primary melanoma cell lines induces antibody-dependent cellular cytotoxicity and TNF-α production. *J Transl Med.* 11:108. 4. **Tomasini P., 2012.** Ipilimumab: its potential in non-small cell lung cancer. *Ther Adv Med Oncol.* 4(2): 43-50.

ANTIBODY ISOTYPE COLLECTION

For your research, InvivoGen provides an anti-hCTLA4 isotype family. This isotype family consists of monoclonal antibodies comprising the variable region of ipilimumab, and the constant region of three different human isotypes; IgG1, IgG4, and IgA2. The isotypes differ in their functional locations and effector functions, such as complement-dependent cytotoxicity (CDC) and antibody-dependent cell-mediated cytotoxicity (ADCC), as presented in the table below.

| Name | Description |
|------------|--|
| Human IgG1 | Most abundant IgG present in serum High CDC, high ADCC |
| Human IgG4 | Least common IgG present in serum No CDC, low ADCC |
| Human IgA2 | Major class in secretions, oligomeric forms, highly resistant to enzymatic degradation. No CDC, low ADCC |

RELATED PRODUCTS

| Product | Catalog Code |
|---------------------------|--------------|
| Anti-hCTLA4-hIgG1 | hctla4-mab1 |
| Anti-hCTLA4-hIgG4 (S228P) | hctla4-mab14 |

Other antibody isotype families are available, such as Anti-hCD20, Anti-hPD1 and Anti-βGal (control).

For more information visit www.invivogen.com/antibody-isotypes.

TECHNICAL SUPPORT

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