Anti-hCTLA4-hIgG1fut
Non-fucosylated monoclonal human IgG1 antibody against human CTLA-4
Catalog # hctla4-mab13
http://www.invivogen.com/anti-hctla4-higg1fut

For research use only, not for diagnostic or therapeutic use
Version # 17C23-MM

PRODUCT INFORMATION
Content: 100 µg anti-hCTLA4-hIgG1fut, purified antibody, provided azide-free and lyophilized
Specificity: cytotoxic T-lymphocyte-associated protein 4 (CTLA-4)
Isotype: Human IgG1
Light chain type: kappa
Clonality: Monoclonal
Source: CHO cells
Purity: Protein G purified
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 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-hlgG1fut 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-hlgG1fut features the constant region of the human IgG1 isotype and the variable region of ipilimumab. Ipilimumab is a fully human IgG1 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. In addition, ipilimumab induces antibody-dependent cell-mediated cytotoxicity (ADCC) and TNF-α production. 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 cancer.

Anti-hCTLA4-hlgG1fut is a non-fucosylated antibody. The absence of the fucose residue from the N-glycans of IgG-Fc results in dramatic enhancement of antibody-dependent cellular cytotoxicity (ADCC) without any detectable change in complement-dependent cytotoxicity (CDC) or antigen binding capability.

Anti-hCTLA4-hlgG1fut was generated by recombinant DNA technology. It has been produced in CHO cells that are deficient for fucosylation and purified by affinity chromatography with protein G.

APPLICATIONS
Anti-hCTLA4-hIgG1fut can be used with anti-hCTLA4-hIgG1 to compare the ADCC activity.

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.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human IgG1</td>
<td>Most abundant IgG present in serum</td>
</tr>
<tr>
<td></td>
<td>High CDC, high ADCC</td>
</tr>
<tr>
<td>Human IgG4</td>
<td>Least common IgG present in serum</td>
</tr>
<tr>
<td></td>
<td>No CDC, low ADCC</td>
</tr>
<tr>
<td>Human IgA2</td>
<td>Major class in secretions, oligomeric forms, highly resistant to enzymatic degradation. No CDC, low ADCC</td>
</tr>
</tbody>
</table>

RELATED PRODUCTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Catalog Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-hCTLA4-hlgG1A2</td>
<td>hctla4-mab7</td>
</tr>
<tr>
<td>Anti-hCTLA4-hlgG4 (S228P)</td>
<td>hctla4-mab14</td>
</tr>
</tbody>
</table>

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.