abcam

**ab234000**

# Anti-CD86 antibody [BU63]

## Key facts

| | |
|---|---|
| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Cell preparation containing CD86 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P42081 |
| **Clone number** | BU63 |
| **Purification technique** | Affinity purification Protein A/G |
| **Light chain type** | kappa |
| **Concentration** | 0.2 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |
| **Purification notes** | Purified from Bioreactor Concentrate by Protein A/G. |

## Reactivity data

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 0.5-1 µg for $10^6$ Cells |

| | |
|---|---|
| **Notes** | (in 0.1 ml). |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 2-4 µg/mL |
| **Notes** | (Primary incubation for 30 minutes at RT). |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information CD86

| | |
|---|---|
| **Function** | Costimulatory molecule that belongs to the immunoglobulin superfamily that plays an important role in T-lymphocyte activation (PubMed:12196291, PubMed:7694363). Acts as the primary auxiliary signal augmenting the MHC/TCR signal in naive T-cells by acting as a ligand for the CD28 receptor which is constitutively expressed on the cell surface of T-cells (PubMed:12196291, PubMed:7694363). May play a critical role in the early events of T-cell activation and costimulation of naive T-cells, such as deciding between immunity and anergy that is made by T-cells within 24 hours after activation (PubMed:7527824). Also involved in the regulation of B cells function, plays a role in regulating the level of IgG(1) produced. Upon CD40 engagement, activates NF-kappa-B signaling pathway via phospholipase C and protein kinase C activation (By similarity). Also acts as an inhibitor of T-cell activation by acting as a ligand for CTLA4, a decoy receptor, thereby blocking CD28-mediated T-cell priming (PubMed:11279501). Isoform 2. Interferes with the formation of CD86 clusters, and thus acts as a negative regulator of T-cell activation. (Microbial infection) Acts as a receptor for adenovirus subgroup B. |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | CD86 also known as B7-2 is a protein involved in the regulation of the immune response. It has an approximate mass of 70 kDa and is expressed on antigen-presenting cells like dendritic cells monocytes and macrophages. Notably CD86 is present on macrophages including those in tissues such as skin and lymphoid organs. Expressed on these cells CD86 serves as a vital mediator in the co-stimulatory signals necessary for T cell activation and survival. |
| **Biological function summary** | CD86 plays a significant role in the immune system by providing secondary signals for T cell activation and differentiation. It is a part of the B7 protein family and forms a complex with CD28 and CTLA-4 on T cells. When CD86 binds to CD28 it sends positive co-stimulatory signals which promote T cell proliferation and cytokine production. On the other hand interaction with CTLA-4 transmits an inhibitory signal which reduces immune response. This dual interaction helps to balance immune activation and tolerance. |
| **Pathways** | CD86 takes part in important immune-related signaling pathways particularly the T cell receptor signaling pathway and the PI3K-Akt signaling pathway. Both pathways are fundamental for initiating immune responses. CD86's interaction with CD28 activates downstream signaling cascades including PI3K-Akt which is important for cell survival and growth. Additionally CD86 collaborates with other proteins such as CD80 another co-stimulatory molecule to amplify T cell activation within these pathways. |
| **Associated diseases and disorders** | CD86 is associated with autoimmune diseases and transplant rejection. In autoimmune diseases like rheumatoid arthritis the overexpression or dysregulation of CD86 can lead to excessive T cell activation causing immune system attacks on the body's own tissues. Similarly in transplant rejection CD86 may contribute by enhancing immune response against transplanted organs. The |

engagement between CD86 and CD28 is a critical factor in these conditions and therapies targeting this interaction are under exploration to mitigate the immune response.

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

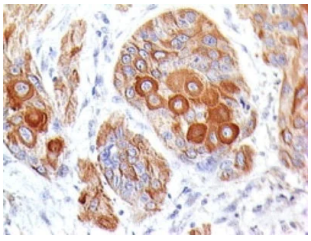
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

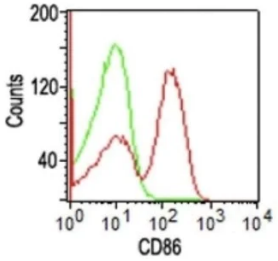
## 2 product images



### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD86 antibody [BU63] (ab234000)

CD86 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD86 antibody

Formalin-fixed, paraffin-embedded human esophageal tumor tissue stained for CD86 using ab234000 at 4 µg/ml in immunohistochemical analysis.




## Flow Cytometry - Anti-CD86 antibody [BU63] (ab234000)

CD86 Flow Cytometry staining using mouse Anti-CD86 antibody

Flow cytometric analysis of human PMBCs labeling CD86 with ab234000 at 1 µg/$10^6$ cells (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.