abcam

ab140238

# Anti-CD82 antibody [C33]

## Key facts

| | |
|---|---|
| **Isotype** | IgG2a |
| **Host species** | Mouse |
| **Storage buffer** | pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Cell preparation containing CD82 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P27701 |
| **Clone number** | C33 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |
| **Purification notes** | ab140238 was purified from cell culture supernatant by protein A affinity chromatography to obtain purity of > 95% (by SDS-PAGE). |

## Reactivity data

## Flow Cyt

### Tested

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|---|---|
| **Species** | Human |
| **Dilution info** | 1-4 µg/mL |
| **Notes** | - |

## IHC-P

### Tested

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|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information CD82

**Function**

Structural component of specialized membrane microdomains known as tetraspanin-enriched microdomains (TERMs), which act as platforms for receptor clustering and signaling (PubMed:19497983). Participates thereby in diverse biological functions such as cell signal transduction, adhesion, migration and protein trafficking. Acts as a attenuator of EGF signaling, facilitating ligand-induced endocytosis of the receptor and its subsequent desensitization (PubMed:10985391, PubMed:35538033). Mechanistically, modulates ligand-induced ubiquitination and trafficking of EGFR via E3 ligase CBL phosphorylation by PKC (PubMed:23897813). Increases cell-matrix adhesion by regulating the membrane organization of integrin alpha4/ITA4 (PubMed:24623721, PubMed:8757325). Modulates adhesion and suppresses cell migration through other integrins such as the alpha6/ITGA6 and beta1/ITGB1 (PubMed:15557282, PubMed:17560548). Decreases cell-associated plasminogen activation by interfering with the interaction between urokinase-type plasminogen activator/PLAU and its receptor PLAUR (PubMed:15677461). Associates with CD4 or CD8 and delivers costimulatory signals for the TCR/CD3 pathway. Plays a role in TLR9 trafficking to acidified CpG-containing compartments by controlling interaction between TLR9 and VAMP3 and subsequent myddosome assembly (By similarity). Inhibits LPS-induced inflammatory response by preventing binding of LPS to TLR4 on the cell surface (PubMed:36945827). Plays a role in the activation of macrophages into anti-inflammatory phenotypes (By similarity). Independently of Toll-like receptor (TLR) signaling, is recruited to pathogen-containing phagosomes prior to fusion with lysosomes and thereby participates in antigen presentation (By similarity). Also acts to control angiogenesis and switch angiogenic milieu to quiescent state by binding and sequestering VEGFA and PDGFB to inhibit the signaling they trigger via their respective cell surface receptor (PubMed:34530889).

## Storage

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| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |

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| **Appropriate long-term storage conditions** | -20°C |
| **Storage information** | Avoid freeze / thaw cycle, Store undiluted |

## Supplementary info

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

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|---|---|
| **Activity summary** | CD82 also known as KAI1 is a member of the tetraspanin family of proteins. It has a molecular mass of approximately 29 to 30 kDa. This protein is widely expressed on the surface of various cell types such as epithelial cells lymphocytes and endothelial cells. It features four transmembrane domains implying a role in organizing membrane microdomains. CD82 is known for its role in promoting cell adhesion and motility through its involvement in protein-protein interactions on the cell surface. |
| **Biological function summary** | CD82 plays a significant role in regulating cell signaling and communication during tumor progression and metastasis. It participates in the formation of tetraspanin-enriched microdomains by associating with other tetraspanins and integrins influencing the cellular microenvironment. Additionally CD82 impacts immune cell interactions by modulating activities of T cells and B cells. Despite not being the predominant component in any major protein complex CD82 influences many cellular processes by regulating diverse signaling pathways. |
| **Pathways** | CD82 modulates both the PI3K-Akt signaling pathway and the Wnt signaling pathway. These pathways are critical in controlling cellular processes like growth and survival contributing to the metastasis-suppressive effects of CD82. In these contexts CD82 associates with proteins such as integrins and cadherins which facilitate its regulation of signal transduction and cellular dynamics. CD82's role in these pathways shows its importance in controlling cancer cell behavior and immune system interactions. |
| **Associated diseases and disorders** | CD82 has been linked to various cancers particularly prostate cancer and melanoma. Its downregulation or loss often correlates with tumor progression and metastasis indicating its function as a metastasis suppressor. In cancer CD82 interacts with proteins like epidermal growth factor receptor (EGFR) and other integrins affecting disease progression by altering cell adhesion migration and invasion. CD82's expression level serves as a potential biomarker for cancer prognosis and treatment outcomes. |

## 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.

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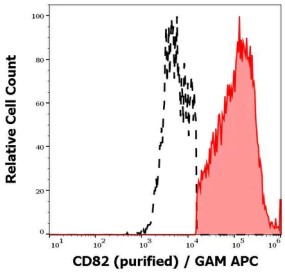
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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## 3 product images

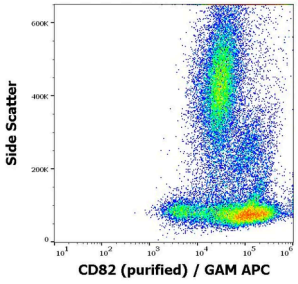



### Flow Cytometry - Anti-CD82 antibody [C33] (ab140238)

CD82 Flow Cytometry staining using mouse Anti-CD82 antibody

Flow cytometric analysis (surface staining) of human peripheral whole blood showing separation of CD82 negative lymphocytes (black dashed), and CD82 positive lymphocytes (red filled). The concentration of Anti-human CD82 (C33) purified antibody in the sample was 1µg/ml.

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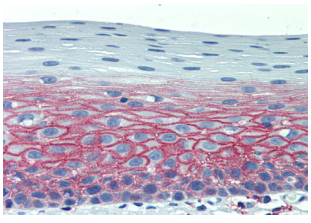



### Flow Cytometry - Anti-CD82 antibody [C33] (ab140238)

CD82 Flow Cytometry staining using mouse Anti-CD82 antibody

Surface staining flow cytometric analysis of human peripheral blood stained using 1µg/ml anti-human CD82 purified antibody GAM APC

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### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD82 antibody [C33] (ab140238)

CD82 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD82 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil tissue labelling CD82 with ab140238.

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