abcam

ab307270

# Anti-ADAM17 antibody [EPR24095-50] - BSA and Azide free

Recombinant | RabMAb | KO Validated

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR24095-50 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1.017 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IP

### Not recommended

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

| | |
|---|---|
| **Notes** | - |

## Flow Cyt

### Tested

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

### Not recommended

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

## ICC/IF

### Not recommended

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

## IHC-P

### Not recommended

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

## WB

### Not recommended

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

| | |
|---|---|
| **Notes** | - |

## Target data

See full target information ADAM17

| | |
|---|---|
| **Function** | Transmembrane metalloprotease which mediates the ectodomain shedding of a myriad of transmembrane proteins including adhesion proteins, growth factor precursors and cytokines important for inflammation and immunity (PubMed:24226769, PubMed:24227843, PubMed:28060820, PubMed:28923481). Cleaves the membrane-bound precursor of TNF to its mature soluble form (PubMed:36078095, PubMed:9034191). Responsible for the proteolytical release of soluble JAM3 from endothelial cells surface (PubMed:20592283). Responsible for the proteolytic release of several other cell-surface proteins, including p75 TNF-receptor, interleukin 1 receptor type II, p55 TNF-receptor, transforming growth factor-alpha, L-selectin, growth hormone receptor, MUC1 and the amyloid precursor protein (PubMed:12441351). Acts as an activator of Notch pathway by mediating cleavage of Notch, generating the membrane-associated intermediate fragment called Notch extracellular truncation (NEXT) (PubMed:24226769). Plays a role in the proteolytic processing of ACE2 (PubMed:24227843). Plays a role in hemostasis through shedding of GP1BA, the platelet glycoprotein Ib alpha chain (By similarity). Mediates the proteolytic cleavage of LAG3, leading to release the secreted form of LAG3 (By similarity). Mediates the proteolytic cleavage of IL6R, leading to the release of secreted form of IL6R (PubMed:26876177, PubMed:28060820). Mediates the proteolytic cleavage and shedding of FCGR3A upon NK cell stimulation, a mechanism that allows for increased NK cell motility and detachment from opsonized target cells. Cleaves TREM2, resulting in shedding of the TREM2 ectodomain (PubMed:28923481). |

## Storage

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|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## Supplementary info

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

| | |
|---|---|
| **Activity summary** | ADAM17 also known as TACE (tumor necrosis factor-alpha converting enzyme) is a metalloprotease belonging to the ADAM (a disintegrin and metalloprotease) family. This protein functions by cleaving and shedding extracellular portions of cell surface proteins. It weighs approximately 93 kDa. ADAM17 is expressed in a range of tissues including the heart liver kidney and brain. The protein plays a role in the regulation of various biological processes through the activation and inactivation of membrane-bound precursor proteins. |
| **Biological function summary** | The ADAM17 protein regulates a multitude of cellular responses such as inflammation and growth factor signaling. It is not part of a complex but interacts with various substrates in the cell membrane. ADAM17 cleaves precursors to release soluble cytokines and growth factors like tumor necrosis factor-alpha (TNF-alpha) and epidermal growth factor receptor (EGFR) ligands which modulate cell proliferation migration and apoptosis. |
| **Pathways** | ADAM17 plays an integral role in both the TNF and EGFR signaling pathways. These pathways are important in maintaining normal cellular homeostasis. ADAM17 interacts with proteins like TNF receptors and ligands of the EGFR family integrating signaling that affects immune response and cell growth. The regulatory function of ADAM17 in these pathways makes it an important target for modulating cellular responses triggered by external stimuli. |
| **Associated diseases and disorders** | ADAM17 has significant implications in conditions such as rheumatoid arthritis and cancer. In rheumatoid arthritis the protein's shedding activity influences inflammatory cytokines contributing to the disease’s pathogenesis alongside proteins like TNF-alpha. In cancer ADAM17's ability to release EGFR ligands affects |

tumor cell proliferation and metastasis with interactions involving EGFR proteins. It is a target of therapeutic interest with research focused on developing inhibitors to manage these diseases effectively.

## 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**

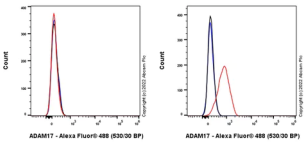
We do not recommend this combination. It is not covered by our product promise.

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.

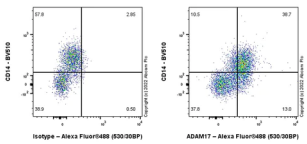
Full details and terms and conditions can be found here:
Terms & Conditions.

## 2 product images



### Flow Cytometry - Anti-ADAM17 antibody [EPR24095-50] - BSA and Azide free (ab307270)

This data was developed using ab307269, the same antibody clone in a different buffer formulation. Flow cytometric analysis of Wild-type HCT116 (human colorectal carcinoma epithelial cell, Right) / ADAM17 knockout HCT116 (Left) cells labeling ADAM17 with ab307269 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells. Positive staining on HCT116 cells (ab266873), while no staining on ADAM17 knockout HCT116 cells (ab255451).



# Flow Cytometry - Anti-ADAM17 antibody [EPR24095-50] - BSA and Azide free (ab307270)

This data was developed using ab307269, the same antibody clone in a different buffer formulation. Flow cytometric analysis of human peripheral blood mononuclear cell (PBMC) cells labeling ADAM17 with ab307269 at 1/50 dilution (1ug)/ Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control. Cells were stained with rabbit IgG or ab307269. Then stained with anti-CD14 conjugated to BV510. Secondary antibody is Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) used at 1/2000 dilution.  Gated on viable cells.

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