abcam

ab57484

Anti-ADAM17 antibody [1F6]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	pH: 7.4 Constituents: 91% Water, 8% Sodium chloride, 0.6% Disodium hydrogenorthophosphate, 0.2% Potassium chloride, 0.2% Potassium phosphate monobasic
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human ADAM17 aa 200-350. The exact immunogen used to generate this antibody is proprietary information. Database link P78536
Clone number	1F6
Purity	Tissue culture supernatant
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	(methanol fixed cells) ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Expected

Species	Mouse, Human
Dilution info	Use at an assay dependent concentration.
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

Shipped at conditions	Blue Ice
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

Notes

This product was changed from ascites to tissue culture supernatant on 25/02/19. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

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

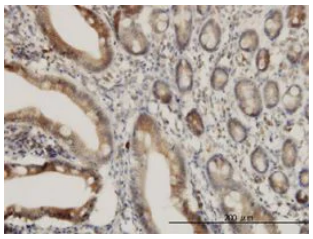
We do not recommend this combination. It is not covered by our product promise.

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.

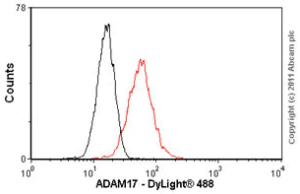
2 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ADAM17 antibody [1F6] (ab57484)

ADAM17 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-ADAM17 antibody

ADAM17 antibody (ab57484) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human small Intestine.
This image was generated using the ascites version of the product.



Flow Cytometry - Anti-ADAM17 antibody [1F6] (ab57484)

ADAM17 Flow Cytometry staining using mouse Anti-ADAM17 antibody

Overlay histogram showing HeLa cells stained with ab57484 (red line). The cells were fixed with methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab57484, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a decreased signal in HeLa cells fixed with 4% paraformaldehyde (10 min) used under the same conditions.
Please note that Abcam do not have data for use of this antibody on non-fixed cells. We welcome any customer feedback.

This image was generated using the ascites version of the product.

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