

## Product datasheet

# Anti-ADAM17 antibody [D1 (A12)] - BSA and Azide free ab215268

[1 References](#) [1 Image](#)

### Overview

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<b>Product name</b>	Anti-ADAM17 antibody [D1 (A12)] - BSA and Azide free
<b>Description</b>	Human monoclonal [D1 (A12)] to ADAM17
<b>Host species</b>	Human
<b>Tested applications</b>	<b>Suitable for:</b> Functional Studies
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant fragment corresponding to Human ADAM17 (extracellular). (Ectodomain tagged to biotin). Database link: <a href="#">P78536</a>
<b>Positive control</b>	TOV21G, IGROV-1, PC3 and HeLa cells stably over expressing HB-EGF-Alkaline Phosphatase.
<b>General notes</b>	<p>ADAM multidomain topology was exploited by first isolating an inhibitory human antibody (D1) that bound TACE-specific noncatalytic regions exclusively through its variable heavy (VH) domain. A D1-VH biased scFv phage-display library was then used to selectively isolate a new variable light (VL) chain that could simultaneously bind to the TACE catalytic domain. The resulting “cross-domain” human IgG1 antibody [D1(A12)] ab215268 is a previously undescribed biochemically holistic ADAM ectodomain inhibitor and demonstrates a unique alternative to small-molecule metalloprotease inhibition.</p> <p>Note from inventor: ab215268 is conformation sensitive and sees only a specific form of the native enzyme (reflecting its redox state). It does not work by IHC or WB. It was designed as a potential drug, active in native situations.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

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<b>Form</b>	Liquid
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<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Constituent: 100% PBS
<b>Carrier free</b>	Yes
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	D1 (A12)
<b>Isotype</b>	IgG1

## Applications

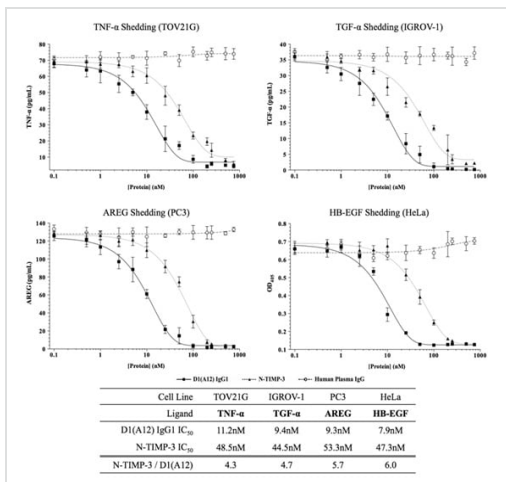
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab215268 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

## Target

<b>Function</b>	Cleaves the membrane-bound precursor of TNF-alpha to its mature soluble form. Responsible for the proteolytical release of soluble JAM3 from endothelial cells surface. 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. Also involved in the activation of Notch pathway.
<b>Tissue specificity</b>	Ubiquitously expressed. Expressed at highest levels in adult heart, placenta, skeletal muscle, pancreas, spleen, thymus, prostate, testes, ovary and small intestine, and in fetal brain, lung, liver and kidney.
<b>Sequence similarities</b>	Contains 1 disintegrin domain. Contains 1 peptidase M12B domain.
<b>Domain</b>	Must be membrane anchored to cleave the different substrates. The cytoplasmic domain is not required for the this activity. Only the catalytic domain is essential to shed TNF and p75 TNFR. The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.
<b>Post-translational modifications</b>	The precursor is cleaved by a furin endopeptidase. Phosphorylated. Stimulation by growth factor or phorbol 12-myristate 13-acetate induces phosphorylation of Ser-819 but decreases phosphorylation of Ser-791.
<b>Cellular localization</b>	Membrane.

## Images



Cancer Shedding cells with known TGF expression of TACE substrates (TOV21G: TNF-α, IGROV1: TGF-α, PC3: AREG) and HeLa cells stably over expressing HB-EGF-Alkaline Phosphatase were used to assay cell-surface TACE activity. Each cell line was stimulated with PMA following a 1 h pretreatment with various concentrations of either ab215268, N-TIMP-3, or control human plasma IgG. Soluble TACE products were quantified from conditioned medium by sandwich ELISA or alkaline phosphatase activity. ab215268 consistently inhibited cell-surface TACE activity around fivefold more potently than N-TIMP-3.

Functional Studies - Anti-ADAM17 antibody [D1 (A12)] (ab215268)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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