

# TACE Antibody

Catalog # ASC10017

## Product Information

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<b>Application</b>	WB, IF, FC, ICC, E
<b>Primary Accession</b>	<a href="#">P78536</a>
<b>Other Accession</b>	<a href="#">NP_003174</a> , <a href="#">73747889</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG
<b>Calculated MW</b>	93021
<b>Concentration (mg/ml)</b>	1 mg/mL
<b>Conjugate</b>	Unconjugated
<b>Application Notes</b>	TACE antibody can be used for detection of TACE by Western blot at 0.5 $\mu$ g/mL. For immunocytochemistry use 10 $\mu$ g/mL. For immunofluorescence start at 10 $\mu$ g/mL.

## Additional Information

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<b>Gene ID</b>	6868
<b>Other Names</b>	TACE Antibody: CSVP, TACE, NISBD, ADAM18, CD156B, CSVP, Disintegrin and metalloproteinase domain-containing protein 17, Snake venom-like protease, ADAM 17, ADAM metalloproteinase domain 17
<b>Target/Specificity</b>	ADAM17; 80 to 130 kDa bands can be detected, which may represent mature protein, precursor, and glycosylated TACE.
<b>Reconstitution &amp; Storage</b>	TACE antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
<b>Precautions</b>	TACE Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	ADAM17 ( <a href="#">HGNC:195</a> )
<b>Synonyms</b>	CSVP, TACE
<b>Function</b>	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: <a href="#">24226769</a> , PubMed: <a href="#">24227843</a> , PubMed: <a href="#">28060820</a> , PubMed: <a href="#">28923481</a> ). 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](#)).

#### Cellular Location

Cell membrane; Single-pass type I membrane protein

#### Tissue Location

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. Expressed in natural killer cells (at protein level) (PubMed:[24337742](#)).

## Background

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TACE Antibody: Tumor-necrosis factor-alpha is a proinflammatory cytokine and contributes to a variety of inflammatory disease responses and programmed cell death. TNF- $\alpha$  is synthesized as a 26K type II membrane-bound precursor that is cleaved by a convertase to generate secreted 17K mature TNF- $\alpha$ . TNF- $\alpha$  converting enzyme (TACE) protein was recently purified and the human and mouse TACE cDNAs were cloned by several groups separately. TACE is a membrane-bound metalloprotease-disintegrin in the family of mammalian ADAM (for a disintegrin and metalloprotease). TACE also processes other cell surface proteins, including TNF receptor, TGFalpha, the L-selectin adhesion molecule, and alpha-cleavage of amyloid protein precursor (APP). TACE mRNA is expressed in a variety of human and murine tissues. TACE was selected as one of the few targets in cytokine activation by the Eighth International Conference of the Inflammation Research Association.

## References

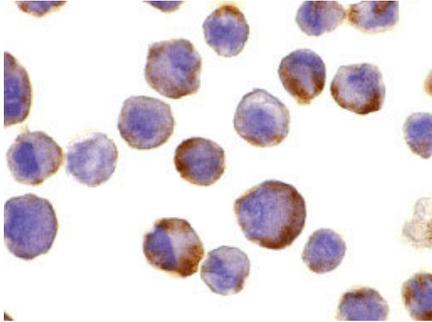
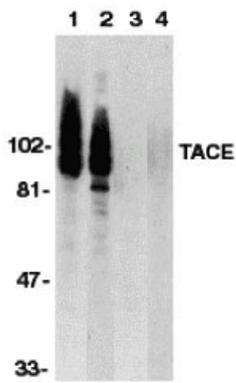
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- Moss ML, Jin SL, Milla ME, et al. Cloning of a disintegrin metalloproteinase that processes precursor tumour-necrosis factor- $\alpha$ . *Nature* 1997;385:733-736
- Mizui Y, Yamazaki K, Sagane K, Tanaka I. cDNA cloning of mouse tumor necrosis factor- $\alpha$  converting enzyme (TACE) and partial analysis of its promoter. *Gene* 1999;233:67-74
- Peschon JJ, Slack JL, Reddy P, et al. An essential role for ectodomain shedding in mammalian development. *Science* 1998;282:1281-4

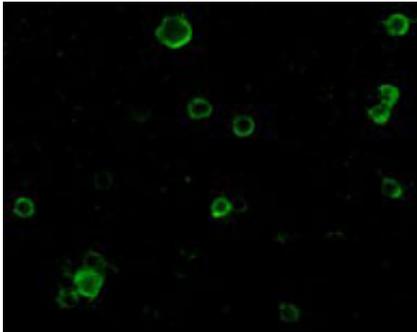
## Images

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Western blot analysis of TACE in HeLa and Jurkat whole cell lysate in the absence or presence of blocking peptide with TACE antibody at 0.5  $\mu$ g/mL.



Immunocytochemistry of TACE in HeLa cells with TACE antibody at 10  $\mu\text{g}/\text{mL}$ .



Immunofluorescence of TACE in HeLa cells with TACE antibody at 10  $\mu\text{g}/\text{mL}$ .

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