

#3976 Store at -20°C

# TACE Antibody



✓ 100 µl  
(10 Western mini-blot)

**Orders** ■ 877-616-CELL (2355)  
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**Support** ■ 877-678-TECH (8324)  
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New 07/08

This product is for *in vitro* research use only and is not intended for use in humans or animals.  
This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, Mk	135 kDa	Rabbit**

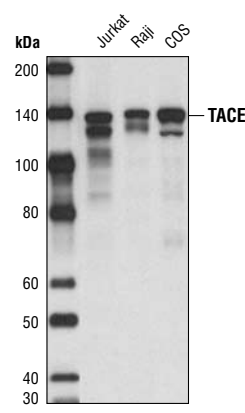
**Background:** TACE (TNF- $\alpha$  converting enzyme), also known as ADAM17, is a transmembrane metalloprotease that plays a key role in the cleavage of a number cell surface molecules in a process known as "shedding". TACE is abundantly expressed in many adult tissues, but in fetal development expression is differentially regulated (1). An important substrate of TACE is pro-TNF- $\alpha$  (1). Increased expression of TACE is associated with several pathological conditions including osteoarthritis and rheumatoid arthritis, where the pro-inflammatory effects of increased TNF- $\alpha$  contribute to disease pathogenesis (2,3). Regulation of other important molecules by TACE such as EGFR and Notch has recently been documented. TACE is responsible for the shedding of EGFR ligands such as amphiregulin and TNF- $\alpha$ . Some tumors have hyperactivated EGFR due to upregulated TNF- $\alpha$  production and upregulated TACE, making TACE a potential target for drug development (4). TACE activates Notch in a ligand-independent manner and has been shown to play a role in the development of the *Drosophila* nervous system (5). TACE has also been proposed to act as  $\alpha$ -secretase for amyloid precursor protein (APP) (6), and to be involved in the renewal and proliferation of neural stem cells (7).

**Specificity/Sensitivity:** TACE Antibody detects endogenous levels of TACE protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids surrounding Val200 of human TACE. Antibodies are purified by Protein A and peptide affinity chromatography.

**Background References:**

- (1) Black, R.A. et al. (1997) *Nature* 385, 729–33.
- (2) Amin, A.R. (1999) *Osteoarthritis Cartilage* 7, 392–4.
- (3) Patel, I.R. et al. (1998) *J Immunol* 160, 4570–9.
- (4) Kenny, P.A. (2007) *Differentiation* 75, 800–8.
- (5) Delwig, A. and Rand, M.D. (2008) *Cell Mol Life Sci*, Epub ahead of print.
- (6) Deuss, M. et al. (2008) *Curr Alzheimer Res* 5, 187–201



Western blot analysis of extracts of various cell lines using TACE Antibody.

Entrez-Gene ID # 6868  
Swiss-Prot Acc. # P78536

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C.  
*Do not aliquot the antibody.*

\*Species cross-reactivity is determined by Western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

**Companion Products:**

- TNF- $\alpha$  Antibody #3707
- Notch1 (6A5) Rabbit mAb #2495
- Cleaved Notch1 (Val1744) Antibody #2421
- APP Antibody #2452
- EGF Receptor Antibody #2232
- Phototope<sup>®</sup>-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO<sup>®</sup> Reagent and 20X Peroxide #7003

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E—ELISA E-P—ELISA Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine  
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.