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Anti-TACE ADAM17 Antibody

Catalog Number: A00604-1

About ADAM17

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.

Overview

Product Name	Anti-TACE ADAM17 Antibody
Reactive Species	Human, Rat
Description	Boster Bio Anti-TACE ADAM17 Antibody (Catalog # A00604-1). Tested in ELISA, WB, ICC, IF applications. This antibody reacts with Human, Rat.
Application	ELISA, IF, ICC, WB
Clonality	Polyclonal
Formulation	TACE Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	TACE antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	P78536

Technical Details

Immunogen	Anti-TACE antibody was raised against a peptide corresponding to 17 amino acids near the carboxy terminus of human TACE. The immunogen is located within the last 50 amino acids of TACE.
Predicted Reactive Species	Mouse
Cross Reactivity	80 to 130 kDa bands can be detected, which may represent mature protein, precursor, and glycosylated TACE.
Isotype	IgG
Form	Liquid

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Concentration	1 mg/mL
Purification	TACE Antibody is affinity chromatography purified via peptide column.
Suggested Dilutions	WB: 0.25-2 ug/mL; ICC: 10 ug/mL; IF: 10 ug/mL. Antibody validated: Western Blot in human and rat samples; Immunocytochemistry in human samples; and Immunofluorescence in human and rat samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.

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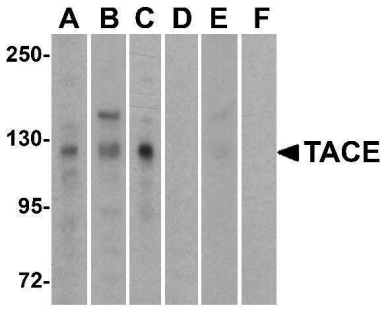
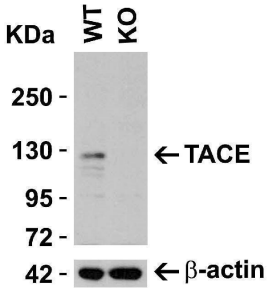
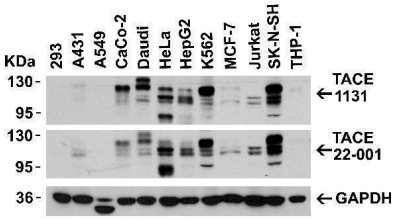
Anti-TACE ADAM17 Antibody (A00604-1) Images



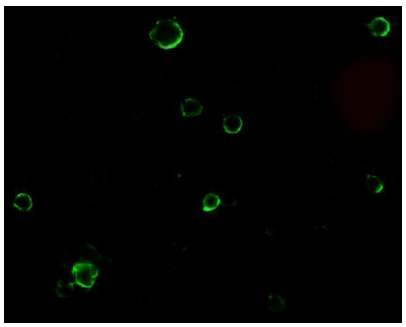
Western Blot Validation of TACE in Human Cell Lines Loading: 15 ug of lysates per lane. Antibodies: TACE (1 ug/mL), 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lanes: HeLa (A,D), Jurkat (B, E), Raji (C,F) in the absence (A-C) or presence (E-F) of blocking peptide.



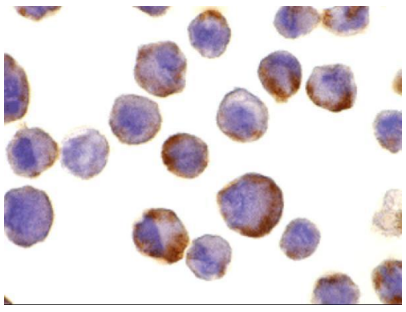
KO Validation in HeLa Cells Loading: 10 ug of HeLa WT cell lysates or TACE KO cell lysates. Antibodies: TACE A00604-1 (0.25 ug/mL) and beta-actin 3779 (1 ug/mL), 1 h incubation at RT in 5% NFDM/TBST. Secondary: Goat Anti-Rabbit IgG HRP conjugate at 1:10000 dilution.



Independent Antibody Validation (IAV) via Protein Expression Profile in Cell Lines Loading: 15 ug of lysates per lane. Antibodies: TACE A00604-1 (0.5 ug/mL), TACE 22-001 (2 ug/mL), and GAPDH (0.02 ug/mL), 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Immunofluorescence Validation of TACE in HeLa Cells Immunofluorescent analysis of 4% paraformaldehyde-fixed HeLa cells labeling TACE with A00604-1 at 10 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green).



Immunocytochemistry Validation of TACE in HeLa Cells Immunohistochemical analysis of HeLa cells using anti-TACE antibody (A00604-1) at 10 ug/ml. Cells was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4˚C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.

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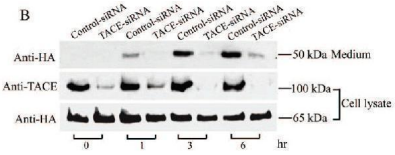
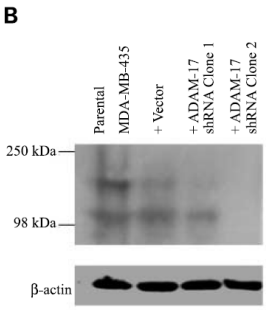
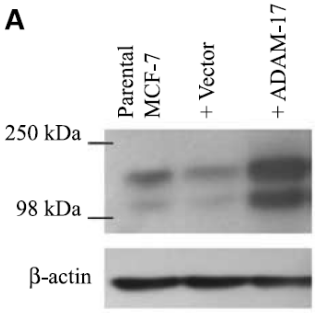


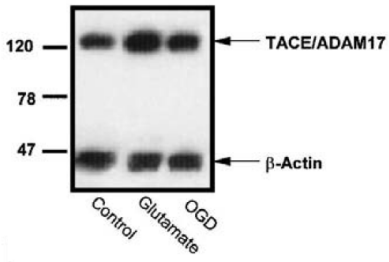
KD Validation of TACE in Monkey COS Cells. (Wang et al., 2006) COS cells stably expressing Pref-1A were transfected with control siRNA or TACE siRNA. TACE was detected in lysates by using the anti-TACE antibody (A00604-1). TACE expression levels were markedly reduced in TACE knockdown cell lysate.



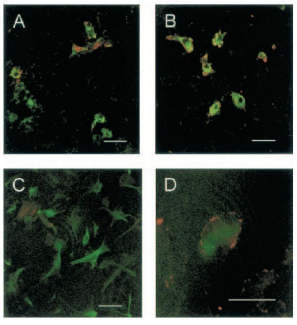
KD Validation of TACE in MDA-MB-435 Cells. (McGowan et al., 2007) ADAM-17 protein expression, following transfection with ADAM-17 shRNA (two clones) or neomycin-resistant negative control vector, was examined by immunoblot analysis with anti-ADAM-17 antibodies (A00604-1).



Overexpression Validation of TACE in MCF-7 Cells. (McGowan et al., 2007) ADAM-17 (TACE) protein expression, following transfection of vector and ADAM-17 cDNA, was examined by immunoblot analysis with anti-ADAM-17 (A00604-1) antibodies in MCF-7 cells. Increased ADAM-17 was detected in ADAM-17 transfected cells.



Induced Expression Validation of TACE in Rat Cortical Neurons (Hurtado et al., 2002) Effect of oxygen–glucose deprivation (OGD) or glutamate on the levels of TACE/ADAM17 in rat cortical cultures. Western blot analysis of TACE in homogenates from control, glutamate, and OGD-exposed cultures from a representative experiment.



Immunofluorescence Validation of TACE in Rat Cortical Neurons (Hurtado et al., 2002) Double immunostaining of control and glutamate-exposed rat cortical cultures. (A) Control cultures show TACE immunoreactivity at the cellular membrane of some microglial cells (B) Glutamate-exposed cultures show that most microglial cells express TACE immunoreactivity. (C) Control cultures show that TACE immunostaining does not colocalize with astrocytes [glial fibrillary acidic protein (GFAP)-positive cells]. (D) Astrocyte (GFAP-positive cell) showing TACE immunoreactivity in its surface after treatment with glutamate.

Immunofluorescence Validation of TACE in Rat Brain (Pradillo et al, 2005) Cellular localization of TACE. Double immunofluorescence staining of brain sections from sham-operated (SHAM; A, C, E) and IPC-exposed animals (IPC; B, D, F) of TACE (red) and the cellular markers (green) NeuN

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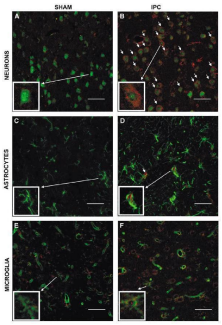

(neurons; A, B), GFAP (astrocytes; C, D) and L. esculentum lectin (microglia and endothelium; E, F). White arrows indicate TACE-positive cells.

Anti-TACE ADAM17 Antibody

For Research Use Only. Not for use in diagnostic procedures.