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Store at -20C
#6978

TACE (D22H4) Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 135	Source/Isotype: Rabbit IgG	UniProt ID: #P78536	Entrez-Gene Id: 6868
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

TACE (D22H4) Rabbit mAb recognizes endogenous levels of total TACE protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human TACE protein.

Background

TACE (TNF- α converting enzyme), also known as ADAM17, is a transmembrane metalloprotease that plays a key role in the cleavage of a number of 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- α (1). Increased expression of TACE is associated with several pathological conditions, including osteoarthritis and rheumatoid arthritis, where the pro-inflammatory effects of increased TNF- α 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- α . Some tumors have hyperactivated EGFR due to upregulated TNF- α 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 an α -secretase for amyloid precursor protein (APP) (6), and to be involved in the renewal and proliferation of neural stem cells (7).

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* 65, 2232-43.
6. Deuss, M. et al. (2008) *Curr Alzheimer Res* 5, 187-201.
7. Rubio-Araiz, A. et al. (2008) *Mol Cell Neurosci* 38, 374-80.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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