

TMP21 (IN) antibody (pAb)

Rabbit Anti-Human/Mouse/Rat TMP21 (IN)

Instruction Manual

Catalog Number	PK-AB718-3999
Synonyms	TMP21 Antibody; Transmembrane emp24 domain-containing protein 10, TMED10
Description	TMP21 is a ubiquitously expressed protein that is involved in vesicular targeting and protein transport. More recent experiments have shown that it is also a component in the presenilin complex and modulates the gamma-secretase but not the epsilon-secretase cleavage activity of the amyloid precursor protein. The presenilin complex is composed of the proteins APH1, nicastrin, and PEN2 in addition to presenilin-1. Together, these proteins cleave the amyloid precursor protein at what is known as the gamma and epsilon-sites and can lead to the accumulation of the Aβ cleavage product that is associated with Alzheimer's disease. Co-immunoprecipitation experiments using antibodies against these proteins also yielded TMP21 indicating that TMP21 may play a role in the regulation of this complex. Suppression of TMP21 expression by siRNA in transfected cells caused increased gamma-secretase activity but not epsilon-secretase activity, and increased Aβ production, demonstrating that TMP21 can modulate gamma-secretase activity.
Quantity	100 µg
Source / Host	Rabbit
Immunogen	TMP21 antibody was raised against an 18 amino acid peptide from near the center of human TMP21.
Purification Method	Affinity chromatography purified via peptide column.
Clone / IgG Subtype	Polyclonal antibody
Species Reactivity	Human, Mouse, Rat
Specificity	
Formulation	Antibody is supplied in PBS containing 0.02% sodium azide.
Reconstitution	During shipment, small volumes of antibody will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µl or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.
Storage & Stability	Antibody can be stored at 4°C for three months and at -20°C 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.
Applications	E, WB, IHC Note: Antibody might be suitable for other applications not tested so far. Optimal concentrations for each application have to be determined individually. TMP21 antibody can be used for detection of TMP21 by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL.
Images	Available upon request.
References	Blunt R, Feick P, Puype M, et al. Tmp21 and p24A, two type I proteins enriched in pancreatic microsomal membranes, are members of a protein family involved in vesicular trafficking. <i>J. Biol. Chem.</i> 1996; 271:17183-9. Chen F, Hasegawa H, Schmitt-Ulms G, et al. TMP21 is a presenilin complex component that modulates -secretase but not gamma-secretase activity. <i>Nature</i> 2006; 440:1208-12. Periz G and Fortini ME. Functional reconstitution of -secretase through coordinated expression of presenilin, nicastrin, aph-1, and pen-2. <i>J. Neurosci. Res.</i> 2004; 77:309-22. Selkoe DJ. The cell biology of beta-amyloid precursor protein and presenilin in Alzheimer's disease. <i>Trends Cell Biol.</i> 1998; 8:447-53.
Images	Available upon request.
Related Products	Cat.No. PK-AB718-3999P; TMP21 Peptide Cat. No. PK-AB718-1403; Mouse Brain Tissue Lysate

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