

### Instruction Manual

<b>Catalog Number</b>	PK-AB718-3997
<b>Synonyms</b>	TMP21 Antibody; Transmembrane emp24 domain-containing protein 10, TMED10
<b>Description</b>	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 Abeta 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 Abeta production, demonstrating that TMP21 can modulate gamma-secretase activity.
<b>Quantity</b>	100 µg
<b>Source / Host</b>	Rabbit
<b>Immunogen</b>	TMP21 antibody was raised against a 19 amino acid peptide from near the carboxy terminus of human TMP21.
<b>Purification Method</b>	Affinity chromatography purified via peptide column.
<b>Clone / IgG Subtype</b>	Polyclonal antibody
<b>Species Reactivity</b>	Human, Mouse, Rat
<b>Specificity</b>	
<b>Formulation</b>	Antibody is supplied in PBS containing 0.02% sodium azide.
<b>Reconstitution</b>	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.
<b>Storage &amp; Stability</b>	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.
<b>Applications</b>	E, WB, IHC, IF    INote: 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 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.
<b>Images</b>	Available upon request.
<b>References</b>	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 gamma-secretase but not epsilon-secretase activity. <i>Nature</i> 2006; 440:1208-12.  Periz G and Fortini ME. Functional reconstitution of gamma-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.
<b>Images</b>	Available upon request.
<b>Related Products</b>	Cat.No. PK-AB718-3997P; TMP21 Peptide Cat. No. PK-AB718-1207; Raji Cell Lysate

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