

Product Information

Anti-TMP21 (N-terminal)

produced in rabbit, affinity isolated antibody

Product Number **T3702**

Product Description

Anti-TMP21 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at N-terminal of human TMP21 (GeneID 10972) conjugated to KLH. This sequence is highly conserved (single amino acid substitution) in mouse and rat TMP21. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-TMP21 (N-terminal) specifically recognizes human TMP21 by immunoblotting (~21 kDa). Staining of the TMP21 band by immunoblotting is specifically inhibited by the TMP21 immunizing peptide.

TMP21 (also termed p24 δ , p23, transmembrane emp24-like trafficking protein 10, TMED10) is a type 1 transmembrane protein, member of the p24/gp25L cargo receptor family that is localized in the endoplasmic reticulum (ER) and the Golgi apparatus.¹⁻⁵ Members of the p24 family are thought to function as receptors for cargo exit from the ER to the Golgi and are involved in vesicular trafficking. They are found in molecular complexes and are enriched in COPI-coated vesicles.

TMP21 has been recently linked to the metabolism of the Alzheimer's disease A β peptide.^{6,7} TMP21 has been shown to be a member of the heteromeric secretase complex that differentially regulates γ -secretase activity without affecting its ϵ -secretase activity. TMP21 is co-localized with the secretase complex components in the ER, Golgi, and cell surface, and is destabilized from the complex in the absence of the presenilins PS1, PS2, and pen-2. TMP21 is thought to modulate intramembrane proteolysis controlling γ -secretase activity and thus preventing the over-production of A β peptide. Overexpression of TMP21 does not alter γ -secretase activity, but suppression of TMP21 results in an increase in A β 40 and A β 42 peptides. This role of TMP21 appears to be independent of its role in protein transport since suppression of both TMP21 and p24a (a member of the p24 cargo family that interacts with TMP21) does not result in additional increase in A β production.

Reagent

Supplied as a solution in 0.01 M PBS, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1–2 μ g/mL is recommended using HepG2 cell lysate.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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7. Vetrivel, K.S. et al., *Mol. Neurodegener.*, **2**, 4 (2007).

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