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TPPP Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP17081c

Specification

TPPP Antibody (Center) Blocking Peptide - Product Information

Primary Accession O94811

TPPP Antibody (Center) Blocking Peptide - Additional Information

Gene ID 11076

Other Names
Tubulin polymerization-promoting protein, TPPP, 25 kDa brain-specific protein, TPPP/p25, p24, p25-alpha, TPPP, TPPP1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

TPPP Antibody (Center) Blocking Peptide - Protein Information

Name TPPP {ECO:0000303|PubMed:17105200, ECO:0000312|HGNC:HGNC:24164}

Function
Regulator of microtubule dynamics that plays a key role in myelination by promoting elongation of the myelin sheath (PubMed:31522887). Acts as a microtubule nucleation factor in oligodendrocytes: specifically localizes to the postsynaptic Golgi apparatus region, also named Golgi outpost, and promotes microtubule nucleation, an important step for elongation of the myelin sheath (PubMed:31522887, PubMed:33831707). Required for both uniform polarized growth of distal microtubules as well as directing the branching of proximal processes (PubMed:31522887). Shows magnesium-dependent GTPase activity; the role of the GTPase activity is unclear (PubMed:21995432, PubMed:21316364). In addition to microtubule nucleation activity, also involved in microtubule bundling and stabilization of existing microtubules, thereby maintaining the integrity of the microtubule network (PubMed:17105200, PubMed:17693641, PubMed:<a href="http://www.uniprot.org/citations/18028908"

target="_blank">18028908, PubMed:26289831). Regulates microtubule dynamics by promoting tubulin acetylation: acts by inhibiting the tubulin deacetylase activity of HDAC6 (PubMed:20308065, PubMed:23093407). Also regulates cell migration: phosphorylation by ROCK1 inhibits interaction with HDAC6, resulting in decreased acetylation of tubulin and increased cell motility (PubMed:23093407). Plays a role in cell proliferation by regulating the G1/S-phase transition (PubMed:23355470). Involved in astral microtubule organization and mitotic spindle orientation during early stage of mitosis; this process is regulated by phosphorylation by LIMK2 (PubMed:22328514).

Cellular Location
Golgi outpost {ECO:0000250|UniProtKB:D3ZQL7}. Cytoplasm, cytoskeleton, microtubule organizing center {ECO:0000250|UniProtKB:D3ZQL7}. Cytoplasm, cytoskeleton. Nucleus Cytoplasm, cytoskeleton, spindle Note=Specifically localizes to the postsynaptic Golgi apparatus region, also named Golgi outpost, which shapes dendrite morphology by functioning as sites of acentrosomal microtubule nucleation (By similarity). Mainly localizes to the cytoskeleton (PubMed:18028908) Also found in the nucleus; however, nuclear localization is unclear and requires additional evidences (PubMed:18028908). Localizes to glial Lewy bodies in the brains of individuals with synucleinopathies (PubMed:15590652, PubMed:17027006). During mitosis, colocalizes with LIMK2 at the mitotic spindle (PubMed:22328514) {ECO:0000250|UniProtKB:D3ZQL7, ECO:0000269|PubMed:15590652, ECO:0000269|PubMed:17027006, ECO:0000269|PubMed:18028908, ECO:0000269|PubMed:22328514}

Tissue Location
Widely expressed..

TPPP Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

TPPP Antibody (Center) Blocking Peptide - Images

TPPP Antibody (Center) Blocking Peptide - Background

TPPP may play a role in the polymerization of tubulin into microtubules, microtubule bundling and the stabilization of existing microtubules, thus maintaining the integrity of the microtubule network. May play a role in mitotic spindle assembly and nuclear envelope breakdown.

TPPP Antibody (Center) Blocking Peptide - References

Tokesi, N., et al. J. Biol. Chem. 285(23):17896-17906(2010)McGovern, D.P., et al. Nat. Genet. 42(4):332-337(2010)Sun, M., et al. Cell. Signal. 21(12):1857-1865(2009)Ovadi, J., et al. Bioessays 31(6):676-686(2009)Zhou, Y., et al. Leuk. Lymphoma 49(10):1945-1953(2008)