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TPPP/p25 Antibody (internal region)

Peptide-affinity purified goat antibody

Catalog # AF3088a

Specification

TPPP/p25 Antibody (internal region) - Product Information

Application	**WB, IHC**
Primary Accession	O94811
Other Accession	NP_008961.1, 11076, 72948 (mouse), 361466 (rat)
Reactivity	**Human, Mouse, Rat**
Predicted	**Pig**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**23694**

TPPP/p25 Antibody (internal region) - 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
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
TPPP/p25 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

TPPP/p25 Antibody (internal region) - 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: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/p25 Antibody (internal region) - Protocols

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

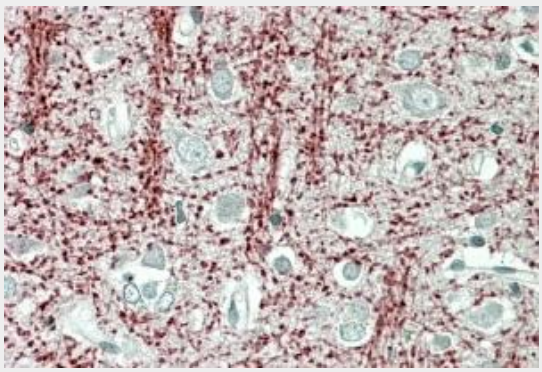
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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TPPP/p25 Antibody (internal region) - Images



AF3088a (0.001 µg/ml) staining of Human Cerebellum lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF3088a (3.8 µg/ml) staining of paraffin embedded Human Cerebral Cortex. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

TPPP/p25 Antibody (internal region) - References

An unstructured protein with destructive potential: TPPP/p25 in neurodegeneration. Ovádi J, Orosz F. BioEssays : news and reviews in molecular, cellular and developmental biology 2009 Jun 31 (6): 676-86. PMID: 19382230