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Phospho-Nudel-T219 Antibody Blocking Peptide

Synthetic peptide
Catalog # BP3181a

Specification

Phospho-Nudel-T219 Antibody Blocking Peptide - Product Information

Primary Accession	Q9GZM8
Other Accession	Q8TAR7

Phospho-Nudel-T219 Antibody Blocking Peptide - Additional Information

Gene ID 81565

Other Names
Nuclear distribution protein nudE-like 1, Protein Nudel, Mitosin-associated protein 1, NDEL1, EOPA, MITAP1, NUDEL

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3181a was selected from the region of human Phospho-Nudel-T219. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

Phospho-Nudel-T219 Antibody Blocking Peptide - Protein Information

Name NDEL1

Synonyms EOPA, MITAP1, NUDEL

Function
Required for organization of the cellular microtubule array and microtubule anchoring at the centrosome. May regulate microtubule organization at least in part by targeting the microtubule severing protein KATNA1 to the centrosome. Also positively regulates the activity of the minus-end directed microtubule motor protein dynein. May enhance dynein-mediated microtubule sliding by targeting dynein to the microtubule plus ends. Required for several dynein- and microtubule-dependent processes such as the maintenance of Golgi integrity, the centripetal motion of secretory vesicles and the coupling of the nucleus and centrosome. Also required during brain development for the migration of newly formed neurons from the ventricular/subventricular

zone toward the cortical plate. Plays a role, together with DISC1, in the regulation of neurite outgrowth. Required for mitosis in some cell types but appears to be dispensible for mitosis in cortical neuronal progenitors, which instead requires NDE1. Facilitates the polymerization of neurofilaments from the individual subunits NEFH and NEFL. Positively regulates lysosome peripheral distribution and ruffled border formation in osteoclasts (By similarity).

Cellular Location
Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle. Note=Localizes to the cell body of the motor neurons and colocalizes with assembled neurofilaments within axonal processes. Localizes to the microtubules of the manchette in elongated spermatids. Colocalizes with DISC1 in the perinuclear region, including the centrosome (By similarity). Localizes to the interphase centrosome and the mitotic spindle. Localizes to the kinetochore in a CENPF-dependent manner.

Tissue Location
Expressed in brain, heart, kidney, liver, lung, pancreas, placenta and skeletal muscle.

Phospho-Nudel-T219 Antibody Blocking Peptide - Protocols

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

- Blocking Peptides

Phospho-Nudel-T219 Antibody Blocking Peptide - Images

Phospho-Nudel-T219 Antibody Blocking Peptide - Background

Nude1 is a LIS1-interacting protein that participates in the regulation of cytoplasmic dynein heavy chain (CDHC) function via phosphorylation by CDK5/p35. CDHC is a microtubule-based minus-end-directed motor protein that plays an important role in mitotic cell division, neuronal migration, and organelle transport.

Phospho-Nudel-T219 Antibody Blocking Peptide - References

Hayashi, M.A., et al., Proc. Natl. Acad. Sci. U.S.A. 102(10):3828-3833 (2005).Morris, J.A., et al., Hum. Mol. Genet. 12(13):1591-1608 (2003).Toyo-oka, K., et al., Nat. Genet. 34(3):274-285 (2003).Yan, X., et al., Mol. Cell. Biol. 23(4):1239-1250 (2003).Ozeki, Y., et al., Proc. Natl. Acad. Sci. U.S.A. 100(1):289-294 (2003).