

NDEL1 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP8736c**Specification****NDEL1 Antibody (Center) Blocking Peptide - Product Information**Primary Accession [Q9GZM8](#)**NDEL1 Antibody (Center) 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 [AP8736c](#) was selected from the Center region of human NDEL1. 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.

NDEL1 Antibody (Center) 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 dispensable 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). Plays a role, together with DISC1, in the regulation of neurite outgrowth (By similarity). May act as a RAB9A/B effector that tethers RAB9-associated late endosomes to the dynein motor for their retrograde transport to the trans-Golgi network (PubMed:34793709).

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.

NDEL1 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

NDEL1 Antibody (Center) Blocking Peptide - Images

NDEL1 Antibody (Center) Blocking Peptide - Background

NDEL1 is a thiol-activated peptidase that is phosphorylated in M phase of the cell cycle. Phosphorylation regulates the cell cycle-dependent distribution of this protein, with a fraction of the protein bound strongly to centrosomes in interphase and localized to mitotic spindles in early M phase. Overall, this protein plays a role in nervous system development.

NDEL1 Antibody (Center) Blocking Peptide - References

Niethammer,M., et.al., Neuron 28 (3), 697-711 (2000)