

**Goat Anti-NDEL1 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1711a****Specification**

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**Goat Anti-NDEL1 Antibody - Product Information**

Application	WB, E
Primary Accession	<a href="#">O9GZM8</a>
Other Accession	<a href="#">NP_110435</a> , <a href="#">81565</a> , <a href="#">83431 (mouse)</a> , <a href="#">170845 (rat)</a>
Reactivity	Human
Predicted	Mouse, Rat, Pig, Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	38375

**Goat Anti-NDEL1 Antibody - Additional Information****Gene ID** 81565**Other Names**

Nuclear distribution protein nudeE-like 1, Protein Nudel, Mitosin-associated protein 1, NDEL1, EOPA, MITAP1, NUDEL

**Dilution**

WB~~1:1000

E~~N/A

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, 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**

Goat Anti-NDEL1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-NDEL1 Antibody - 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:<a href="http://www.uniprot.org/citations/34793709" target="\_blank">34793709</a>).

**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.

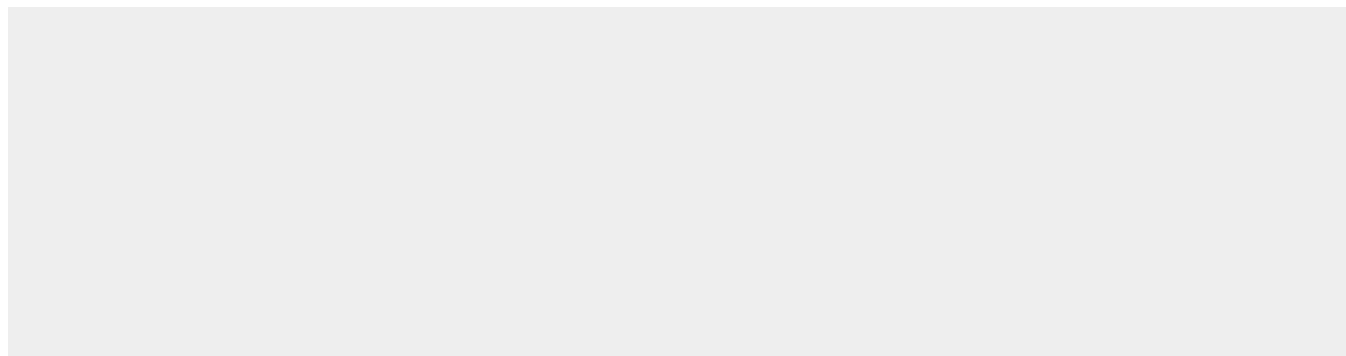
**Tissue Location**

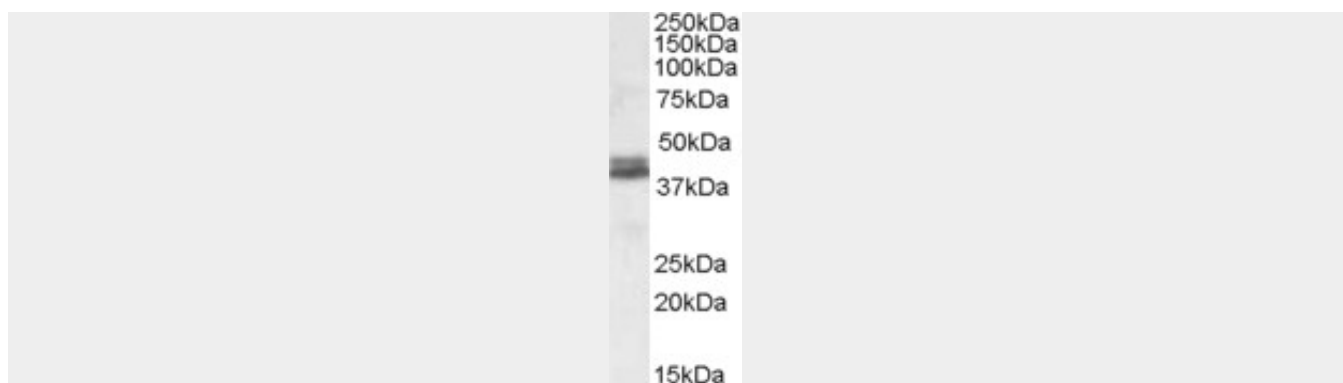
Expressed in brain, heart, kidney, liver, lung, pancreas, placenta and skeletal muscle.

**Goat Anti-NDEL1 Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Goat Anti-NDEL1 Antibody - Images**



AF1711a (0.1 µg/ml) staining of Human Cerebellum lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### **Goat Anti-NDEL1 Antibody - Background**

This gene encodes 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. Alternate transcriptional splice variants, encoding different isoforms, have been characterized.

### **Goat Anti-NDEL1 Antibody - References**

Evidence of statistical epistasis between DISC1, CIT and NDEL1 impacting risk for schizophrenia: biological validation with functional neuroimaging. Nicodemus KK, et al. Hum Genet, 2010 Jan 19. PMID 20084519.

Functional interplay between LIS1, NDE1 and NDEL1 in dynein-dependent organelle positioning. Lam C, et al. J Cell Sci, 2010 Jan 15. PMID 20048338.

Ndel1 palmitoylation: a new mean to regulate cytoplasmic dynein activity. Shmueli A, et al. EMBO J, 2010 Jan 6. PMID 19927128.

Genetic association and post-mortem brain mRNA analysis of DISC1 and related genes in schizophrenia. Rastogi A, et al. Schizophr Res, 2009 Oct. PMID 19632097.

Opposing effects of Ndel1 and alpha1 or alpha2 on cytoplasmic dynein through competitive binding to Lis1. Ding C, et al. J Cell Sci, 2009 Aug 15. PMID 19622634.