10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DCTN1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP9706a

Specification

DCTN1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q14203

DCTN1 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 1639

Other Names
Dynactin subunit 1, 150 kDa dynein-associated polypeptide, DAP-150, DP-150, p135, p150-glued, DCTN1

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.

DCTN1 Antibody (N-term) Blocking Peptide - Protein Information

Name DCTN1 (HGNC:2711)

Function
Part of the dynactin complex that activates the molecular motor dynein for ultra-processive transport along microtubules (By similarity). Plays a key role in dynein-mediated retrograde transport of vesicles and organelles along microtubules by recruiting and tethering dynein to microtubules. Binds to both dynein and microtubules providing a link between specific cargos, microtubules and dynein. Essential for targeting dynein to microtubule plus ends, recruiting dynein to membranous cargos and enhancing dynein processivity (the ability to move along a microtubule for a long distance without falling off the track). Can also act as a brake to slow the dynein motor during motility along the microtubule (PubMed:25185702). Can regulate microtubule stability by promoting microtubule formation, nucleation and polymerization and by inhibiting microtubule catastrophe in neurons. Inhibits microtubule catastrophe by binding both to microtubules and to tubulin, leading to enhanced microtubule stability along the axon (PubMed:23874158). Plays a role in metaphase spindle orientation (PubMed:22327364). Plays a role in centriole cohesion and subdistal appendage organization and function. Its recruitment to the centriole in a KIF3A-dependent manner is essential for the maintenance of centriole cohesion and the formation of subdistal appendage. Also

required for microtubule anchoring at the mother centriole (PubMed:23386061). Plays a role in primary cilia formation (PubMed:25774020).

Cellular Location
Cytoplasm. Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Cytoplasm, cytoskeleton, spindle. Nucleus envelope. Cytoplasm, cell cortex. Note=Localizes to microtubule plus ends (PubMed:17828277, PubMed:22777741, PubMed:25774020). Localizes preferentially to the ends of tyrosinated microtubules (PubMed:26972003). Localization at centrosome is regulated by SLK- dependent phosphorylation (PubMed:23985322). Localizes to centrosome in a PARKDA-dependent manner (PubMed:20719959). Localizes to the subdistal appendage region of the centriole in a KIF3A-dependent manner (PubMed:23386061). PLK1-mediated phosphorylation at Ser-179 is essential for its localization in the nuclear envelope (PubMed:20679239).

Tissue Location
Brain.

DCTN1 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

DCTN1 Antibody (N-term) Blocking Peptide - Images

DCTN1 Antibody (N-term) Blocking Peptide - Background

DCTN1 is the largest subunit of dynactin, a macromolecular complex consisting of 10 subunits ranging in size from 22 to 150 kD. Dynactin binds to both microtubules and cytoplasmic dynein. Dynactin is involved in a diverse array of cellular functions, including ER-to-Golgi transport, the centripetal movement of lysosomes and endosomes, spindle formation, chromosome movement, nuclear positioning, and axonogenesis. This subunit interacts with dynein intermediate chain by its domains directly binding to dynein and binds to microtubules via a highly conserved glycine-rich cytoskeleton-associated protein (CAP-Gly) domain in its N-terminus.

DCTN1 Antibody (N-term) Blocking Peptide - References

Hong, Z., et al. Cell Res. 19(12):1334-1349(2009)Zhapparova, O.N., et al. Traffic 10(11):1635-1646(2009)Rocha, N., et al. J. Cell Biol. 185(7):1209-1225(2009)Vilarino-Guell, C., et al. Neurology 72(23):2024-2028(2009)Chan, Y.W., et al. J. Cell Biol. 185(5):859-874(2009)