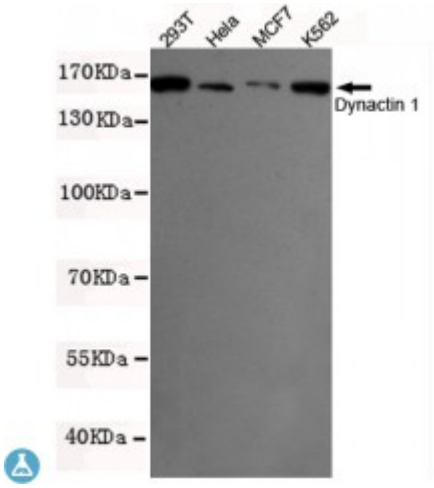
Anti-Dynactin 1 antibody



Description	Mouse monoclonal to Dynactin 1.

Model	STJ99032
Host	Mouse
Reactivity	Human
Applications	ELISA, WB
Immunogen	Purified recombinant Dynactin 1 protein fragments expressed in E.coli
Immunogen Region	N-term
Gene ID	1639
Gene Symbol	DCTN1
Dilution range	WB 1:500-2000ELISA 1:10000-20000
Specificity	This antibody detects endogenous levels of Dynactin 1 (N-term), and does not cross-react with related proteins.
Tissue Specificity	Brain.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Clone ID	3D5-C6-D5
Note	For Research Use Only (RUO).
Protein Name	Dynactin subunit 1 150 kDa dynein-associated polypeptide DAP-150 DP-150 p135 p150-glued
Molecular Weight	150kDa

Clonality	Monoclonal
Conjugation	Unconjugated
Isotype	IgG2b
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:2711OMIM:105400
Alternative Names	Dynactin subunit 1 150 kDa dynein-associated polypeptide DAP-150 DP-150 p135 p150-glued
Function	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 . 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 . Plays a role in metaphase spindle orientation . Plays a role in centriole cohesion and subdistal appendage organization and function. Its recruitement 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 . Plays a role in primary cilia formation .
Sequence and Domain Family	The CAP-Gly domain is essential for interactions with microtubules and its binding partners and for its motion along the microtubules. Essential for its preferential binding to tyrosinated microtubules and for promoting the sustained interaction of the dynein motor with microtubules.
Cellular Localization	Cytoplasm Cytoplasm, cytoskeleton Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole Cytoplasm, cytoskeleton, spindle Nucleus envelope Cytoplasm, cell cortex. Localizes to microtubule plus ends . Localizes preferentially to the ends of tyrosinated microtubules . Localization at centrosome is regulated by SLK-dependent phosphorylation . Localizes to centrosome in a PARKDA-dependent manner . Localizes to the subdistal appendage region of the centriole in a KIF3A-dependent manner . PLK1-mediated phosphorylation at Ser-179 is essential for its localization in the nuclear envelope .
Post-translational Modifications	Ubiquitinated by a SCF complex containing FBXL5, leading to its degradation by the proteasome. Phosphorylation by SLK at Thr-145, Thr-146 and Thr-147 targets DCTN1 to the centrosome. It is uncertain if SLK phosphorylates all three threonines or one or two of them. PLK1-mediated phosphorylation at Ser-179 is essential for its localization in the nuclear envelope, promotes its dissociation from microtubules during early mitosis

and positively regulates nuclear envelope breakdown during prophase.