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Rabbit Anti-DYNLT1/FITC Conjugated antibody

SL11310R-FITC

Product Name:	Anti-DYNLT1/FITC
Chinese Name:	FITC标记的动力蛋白轻链
Alias:	TCTEL1; DYNLT1; Dynein light chain Tctex-type 1; Protein CW-1; T-complex testis-specific protein 1 homolog; DYLT1_HUMAN; TCTEX-1; TCTEX1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,Horse,Rabbit,Sheep,
Applications:	ICC=1:50-200IF=1:50-200 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	12kDa
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human TCTEL1
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20℃. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.
Product Detail:	**background:** Cytoplasmic dynein is the major motor protein complex responsible for minus-end, microtubule-based motile processes. Each dynein complex consists of 2 heavy chains that have ATPase and motor activities, plus a group of accessory polypeptides. TCTEX1 is a dynein light chain involved in cargo binding (Chuang et al., 2005 [PubMed 15992542]).[supplied by OMIM, Mar 2008]. **Function:** Acts as one of several non-catalytic accessory components of the cytoplasmic dynein 1

complex that are thought to be involved in linking dynein to cargos and to adapter proteins that regulate dynein function. Cytoplasmic dynein 1 acts as a motor for the intracellular retrograde motility of vesicles and organelles along microtubules. Binds to transport cargos and is involved in apical cargo transport such as rhodopsin-bearing vesicles in polarized epithelia. Is involved in intracellular targeting of D-type retrovirus gag polyproteins to the cytoplasmic assembly site. May also be a accessory component of axonemal dynein.
Plays a role in neuronal morhpogenesis; the function is independent of cytoplasmic dynein and seems to be coupled to regulation of the actin cytoskeleton by enhancing Rac1 activity. The function in neurogenesis may be regulated by association with a G-protein beta-gamma dimer. May function as a receptor-independent activator of heterotrimeric G-protein signaling; the activation appears to be independent of a nucleotide exchange. Plays a role in regulating neurogenesis; inhibits the genesis of neurons from precursor cells during cortical development presumably by antagonizing ARHGEF2. Involved in the regulation of mitotic spindle orientation.

Subunit:
Homodimer (Probable). The cytoplasmic dynein 1 complex consists of two catalytic heavy chains (HCs) and a number of non-catalytic subunits presented by intermediate chains (ICs), light intermediate chains (LICs) and light chains (LCs); the composition seems to vary in respect to the IC, LIC and LC composition. The heavy chain homodimer serves as a scaffold for the probable homodimeric assembly of the respective non-catalytic subunits. The ICs and LICs bind directly to the HC dimer and the LCs assemble on the IC dimer. DYNLT1 and DYNLT3 compete for association with dynein IC (DYNC1I1 or DYNC1I2). Self-associates. Interacts with DYNC1I1 and DYNC1I2. Interacts with RHO. Interacts with DOC2A, DOC2B and SCN10A. Interacts with PVR. Interacts with SVIL isoform 2. Interacts with BMPR2. Interacts with GNB1; the interaction occurs in presence of guanine nucleotide-binding protein G(T) subunit gamma; the interaction diminishes the association of DYNLT1 with dynein IC (DYNC1I1 or DYNC1I2). Interacts with GNB2, GNB3 and GNB5; the interactions occur in presence of guanine nucleotide-binding protein G(T) subunit gamma (By similarity). Interacts with human papillomavirus 16 L2 protein; this interaction is essential for virus intracellular transport during entry.

Subcellular Location:
Golgi apparatus. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Localizes to mitotic spindles.

Tissue Specificity:
Expressed in heart, placenta, skeletal muscle kidney, pancreas, spleen, prostate, testis, ovary, ileum and colon. Expressed in lung endothelial and smooth muscle cells (at protein level).

Post-translational modifications:
Phosphorylated by BMPR2; the phosphorylation is abolished by BMPR2 mutations in exon 12 which lead to truncated forms of BMPR2 and which are linked to primary

	pulmonary hypertension (PPH1) [MIM:178600]. The phosphorylation status is proposed to regulate the association with the cytoplasmic dynein complex and may have role in cytoplasmic dynein cargo release. **Similarity:** Belongs to the dynein light chain Tctex-type family. **Database links:** UniProtKB/Swiss-Prot: P63172 **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.