Anti-MYO10 antibody

Description	Unconjugated Rabbit polyclonal to MYO10

Model	STJ191014
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human MYO10 protein.
Immunogen Region	680-760aa
Gene ID	4651
Gene Symbol	MYO10
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	MYO10 Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Ubiquitous.
Purification	MYO10 antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Unconventional myosin-X Unconventional myosin-10
Molecular Weight	226 kDa
Clonality	Polyclonal
Conjugation	Unconjugated

Isotype	IgG
Formulation	Liquid form in PBS containing 50% glycerol,and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:7593OMIM:601481
Alternative Names	Unconventional myosin-X Unconventional myosin-10
Function	Myosins are actin-based motor molecules with ATPase activity. Unconventional myosins serve in intracellular movements. MYO10 binds to actin filaments and actin bundles and functions as plus end-directed motor. The tail domain binds to membranous compartments containing phosphatidylinositol 3,4,5-trisphosphate or integrins, and mediates cargo transport along actin filaments. Regulates cell shape, cell spreading and cell adhesion. Stimulates the formation and elongation of filopodia. May play a role in neurite outgrowth and axon guidance. In hippocampal neurons it induces the formation of dendritic filopodia by trafficking the actin-remodeling protein VASP to the tips of filopodia, where it promotes actin elongation. Plays a role in formation of the podosome belt in osteoclasts. Isoform Headless: Functions as a dominant-negative regulator of isoform 1, suppressing its filopodia-inducing and axon outgrowth-promoting activities. In hippocampal neurons, it increases VASP retention in spine heads to induce spine formation and spine head expansion .
Sequence and Domain Family	Interaction between the motor domain and the tail leads to an inactive, monomeric conformation. Phospholipid binding via the PH domains leads to the formation of the active, dimeric form of the protein and strongly increases actin-dependent ATPase activity and motor activity . Interacts with membranes containing phosphatidylinositol-3,4,5-trisphosphate via the PH domains. IQ 3 domain mediates high-affinity calcium-dependent binding to CALM3/CLP.; The SAH (single alpha-helix) region is characterized by a high content of charged residues which are predicted to stabilize the alpha-helical structure by ionic bonds. It can refold after extension suggesting an in vivo force-dependent function. The isolated SAH domain is monomeric; however, in its distal part seems to form a semirigid helical structure which overlaps with a region shown to mediate antiparallel coiled coil-mediated dimerization.
Cellular Localization	Cytoplasm, cytosol Cell projection, lamellipodium Cell projection, ruffle Cytoplasm, cytoskeleton Cell projection, filopodium tip Cytoplasm, cell cortex Cell projection, filopodium membrane. May be in an inactive, monomeric conformation in the cytosol. Detected in cytoplasmic punctae and in cell projections. Colocalizes with actin fibers. Undergoes forward and rearward movements within filopodia. Interacts with microtubules.
Post-translational Modifications	The initiator methionine for isoform Headless is removed.