

Abstract

Wnt signalling belongs to conserved pathways and mediates cell fate decision, development, regeneration and adult tissue homeostasis. Disruption or misregulation of Wnt signalling pathway often leads to disease. Wnt proteins are hydrophobic glycoproteins which need a special receptor for transport from Golgi Apparatus to cell surface, which is called MIG-14 in *Caenorhabditis elegans* and Wntless (Wls) in mammals. In this study, I focus on understanding mechanisms that regulate MTM-6 protein activity. MTM-6, a lipid phosphatase associated with endosomal membrane, has been recently identified as a regulator of MIG-14/Wls trafficking in *Caenorhabditis elegans*. Silencing of *mtm-6* leads to misregulation of some Wnt-directed processes, such as migration of Q neuroblasts progeny. This study reports identification of novel *mtm-6* genetic interactors that have been found to influence migration of Q neuroblasts progeny through Wnt signalling. New knowledge about *mtm-6* genetic interactions bring us near to understanding of Wnt signalling regulation.

Keywords:

Caenorhabditis elegans, MTM-6, SEL-5, Wntless, Wnt, endosomes, phosphoinositides, retromer