

ABSTRACT

Revised Abstract:

Spatio-temporal distribution of cellular organelles is mediated by motor proteins (dynein, kinesin and myosin) that drive a variety of intricate and important movements inside the cell. Molecular motors are linked to different cargo through adaptor proteins that not only aid in cargo selection but also enhance the processivity of motor. Cytoplasmic dynein regulates retrograde transport by associating with its activator dynactin. Previous studies in lower eukaryotes have implicated the role of Hook protein as dynein adaptors. Mammalian Hook proteins (Hook₁ and Hook₃) have been reported to mediate minus-end directed motility of early endosomes and organization of golgi complex respectively. However, the role of another Hook paralog, Hook₂ that localizes to centrosomes, as a dynein adaptor is not yet known. Here we demonstrate that Hook₂ associates with different subunits of dynein (DIC) and dynactin (p150^{glued}) complex. These findings suggest that Hook₂ is also a plausible dynein adaptor.