Title:	Characterisation of a novel autophagy regulator and its interaction partners
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Abstract:	Lysosomes are terminal degradative organelles that receive and degrade secretory, endocytic, autophagic, and phagocytic pathway components. Vesicular transport to the lysosome entails vesicle budding, motility, tethering, and fusion with the acceptor membrane to deliver cargo to the appropriate compartment. This mechanism is tightly regulated by small G proteins such as Rab/Arf/Arl-GTPases, tethering factors, and SNAREs, which mediate the fusion of transport vesicles with their respective target membranes, ensuring cargo specificity. Previous research identified the role of a protein in autophagosome biogenesis and fusion with lysosomes. According to whole-exome sequence analysis, a mutation in this gene leads to an autosomal-recessive complicated form of the disease known as Hereditary Spastic Paraplegia (HSP). The protein of interest was cloned, purified, and tested for its interactions with an endocytic regulatory protein in this project. To investigate this interaction, I used the yeast two hybrid assay, GST- pulldown and MBP-pulldown. My findings shed light on how this protein localises to endocytic compartments.
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