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Title: Characterization of Rabip4' as an Effector of the Lysosomal Small GTPase Arl8b

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Abstract: Small GTPases recruit effectors to carry out downstream functions. Arl8b, a small GTPase localizes to lysosomes. Some of the known effectors of Arl8b like PLEKHM2 and PLEKHM1 contain a N terminal RUN domain. Another family of RUN domain containing proteins is the RUFY (RUN and FYVE domain containing) family of proteins. It has four members -RUFY1, RUFY2, RUFY3 and RUFY4. RUFY1 has two isoforms-Rabip4' and Rabip4. These are early endosomal and are the effectors of Rab4 and Rab14. Previous studies had shown that Rabip4' silencing leads to lysosomal clustering towards the cell periphery. We find that Rabip4' colocalizes with Arl8b and also pulls down HA-Arl8b in a GST pull down assay. We propose to show that Arl8b and Rabip4' interact directly via the latter's RUN domain. We make use of the purified protein-protein interaction assay in trying to determine the interaction.

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