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Title:	Characterizing SNAP47 a SNARE partner for multi subunit tethering complex HOPS
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Abstract:	Compartmentalized eukaryotic cell is specialized to perform distinct functions. Intracellular vesicular trafficking pathways facilitate cellular communication by cargo exchange and ensure proper functioning of organelles. Membrane trafficking is regulated by small GTPases which act as molecular switches that cycle between active membrane bound GTP and cytosolic GDP form. One such small GTPase is Arl8b which marks late endosome and recruit its effectors like HOPS complex which is a multi-subunit tethering complex which bridges two membranes for fusion. Membrane fusion follows a defined order of events: membrane tethering mediated by Rabs and tethers, assembly of SNARE complexes and lipid bilayer mixing. SNARE proteins play a key role in vesicular trafficking as they catalyze the final fusion of two membranes. Here, in our study we report a SNARE complex of SNAP47(Qbc) involving Syntaxin17(Qa) and VAMP7/VAMP8 as cognate SNARE partners. This complex of SNAP47 interacts with multiple subunits of endo-lysosomal tether HOPS complex and localize on LAMP1 decorated endosomes. Taken together these findings suggest the possible role of SNAP47 in endo-lysosomal pathway.
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