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Spectrin βII suppresses endosomal vesicle trafficking by regulating membrane dynamics

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Spectrin is a cytoskeleton protein present in eukaryotic cells, contributing to membrane stability cooperating with actin and ankyrin. Our proteome analysis identified that Spectrin highly associates with Phosphatidylserine (PS) containing vesicles. However, the importance of the interaction between PS and Spectrin remains poorly understand. Therefore, we examined distribution of Spectrin βII, which is the highest expression isoform in HeLa cells. We are found that Spectrin βII localizes on Transferrin-positive endosomes known to have high PS distribution in addition to the plasma membrane. In addition, Spectrin βII deletion affected on the Transferrin transport and endosomal morphology. We provide new insights of Spectrin as regulators of intracellular vesicle trafficking.

Session

Interaction lipids/polymers/membrane proteins

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