

Figure S1. Cellular localisation of OCRL1 isoforms in HeLa cells. HeLa cells transiently expressing GFP-tagged OCRL1 isoform a or b were fixed and imaged by epifluorescence microscopy. Bar,  $10 \, \mu m$ .

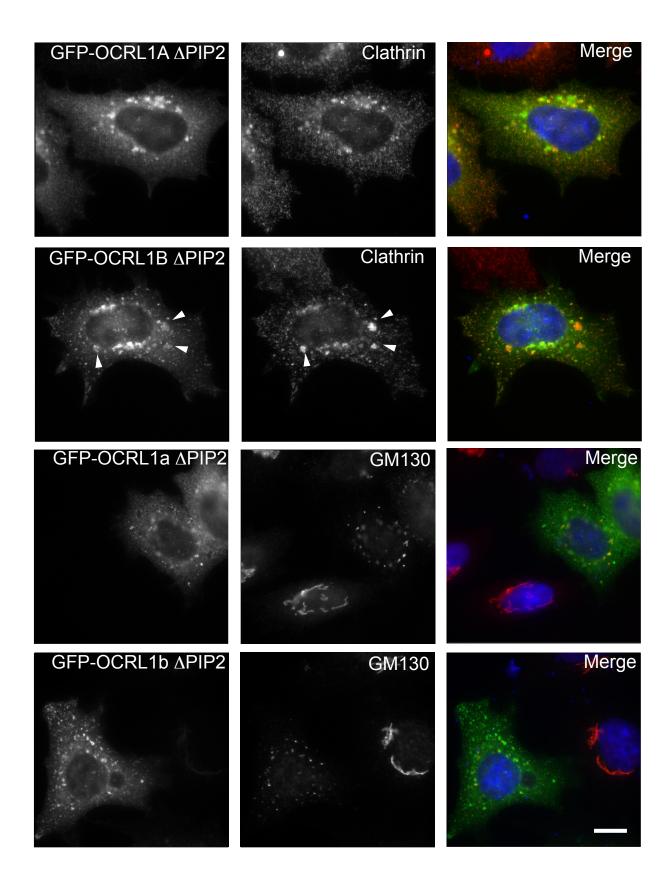


Figure S2. Expression of GFP-OCRL1 isoform a and b  $\triangle$ PIP2 mutants. HeLa cells expressing GFP-tagged OCRL1 isoform a or b  $\triangle$ PIP2 mutants (green) were labelled with antibodies to clathrin heavy chain or the cis-Golgi protein GM130 (red). Arrowheads indicate enlarged vacuolar clathrin-positive endosomes seen with isoform b. Bar, 10 µm.

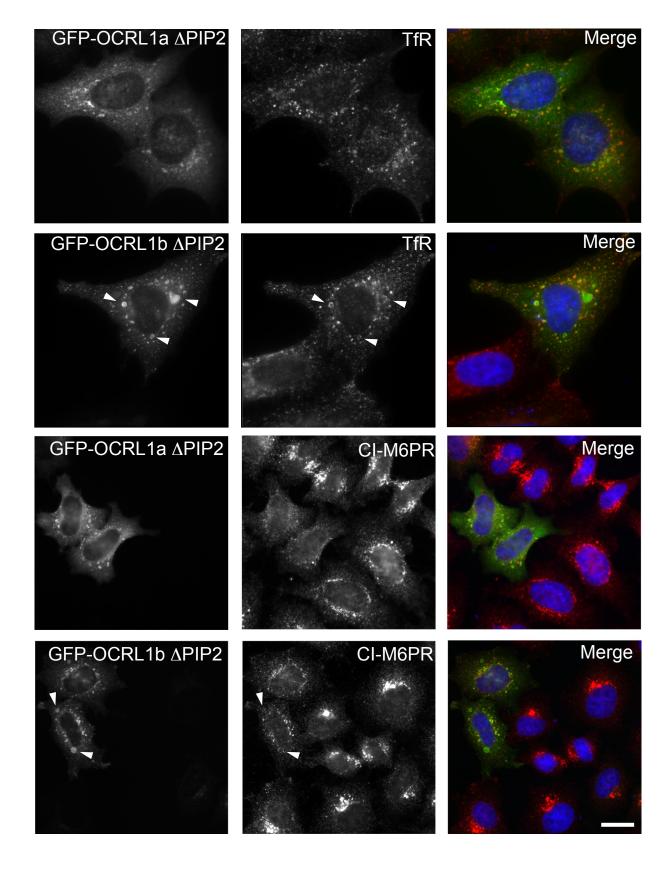


Figure S3. Expression of GFP-OCRL1 isoform a and b  $\triangle$ PIP2 mutants. HeLa cells expressing GFP-tagged OCRL1 isoform a or b  $\triangle$ PIP2 mutants (green) were labelled with antibodies to transferrin receptor (TfR) or the cation independent mannose 6-phosphate receptor (CI-M6PR). Arrowheads indicate enlarged vacuolar endosomes seen with isoform b. Bar, 10 µm.