Rab4b in the control of endosomal traffic

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Rab4b

-Expressed ubiquituously

-Under the control of CIITA in B lymphocytes (a transcriptional co-activator of MHC-II molecules)

Krawczyk M et al, PLOS genetics (2008); Krawczyk M et al, Nucleic Acid Res (2007)

⇨ Possible role in antigen presentation

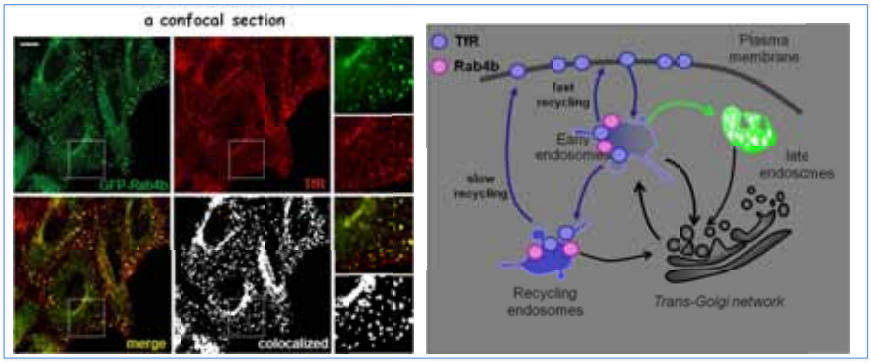
- Highly expressed in adipocyte compared to Rab4a
- Colocalized with the glucose transporters Glut4 (sequestration compartment and endosomal compartment)
- Controls Glut4 localisation and glucose transport

Kaddai et al, PLOS One (2009)

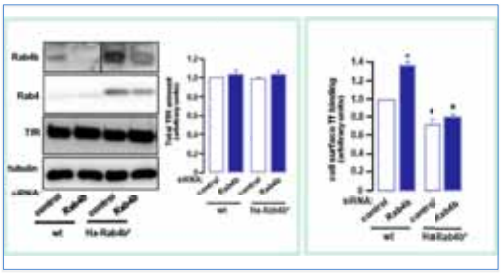
⇨ Possible role in glucose homeostasis

-also highly expressed in macrophages

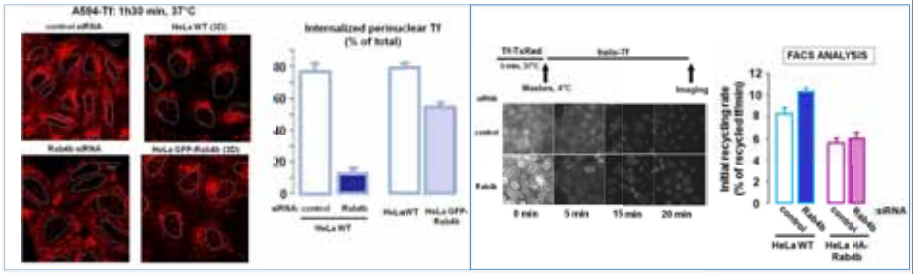
Rab4b is co-localized with TfR in HeLa cells



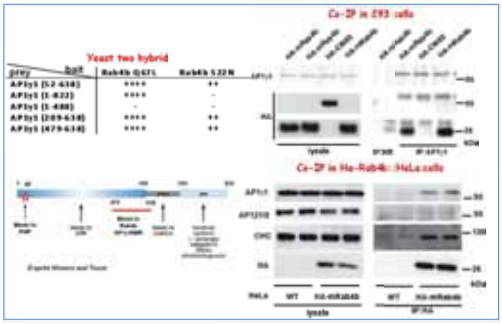
Rab4b is involved in the control of TfR localisation



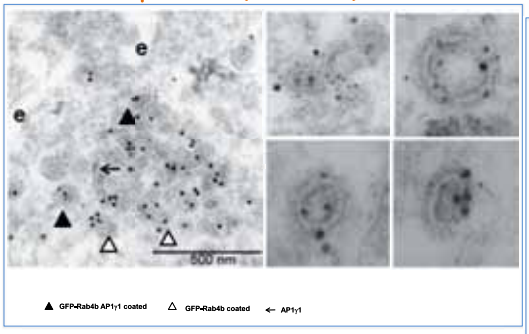
Rab4b is required for EE to RE traffic



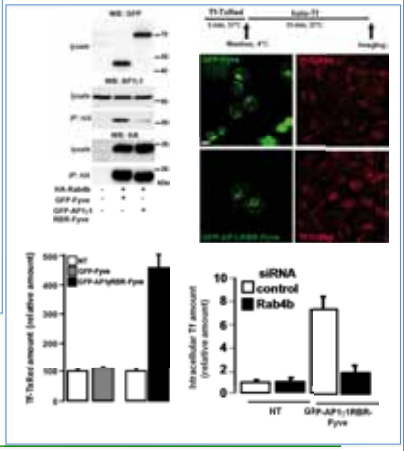
Rab4b binds AP1γ1 in yeast two-hybrid and in Co-IP



Rab4b is colocalized with AP1γ1 and clathrin in IF experiment (not shown) and in EM



The overexpression of GFP-AP1γ1RBR-Fyve inhibits tf sorting from endosomes



Our results are in favor of a role of Rab4b in a the trafficking between early endosomes and recycling endosomes. It probably permits budding from early endosomes through the recruitment of a clathrin coats through its interaction with the AP1 complex

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