

Publication

A novel assay to demonstrate an intersection of the exocytic and endocytic pathways at early endosomes

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

ID 153662

Author(s) Laird, V; Spiess, M

Author(s) at UniBasel [Spiess, Martin](#) ;

Year 2000

Title A novel assay to demonstrate an intersection of the exocytic and endocytic pathways at early endosomes

Journal Experimental cell research

Volume 260

Number 2

Pages / Article-Number 340-5

Keywords asialoglycoprotein receptor, endocytosis, exocytosis, transferrin, basolateral sorting

The mechanism of transport of membrane proteins from the trans-Golgi to the cell surface is still poorly understood. Previous studies suggested that basolateral membrane proteins, such as the transferrin receptor and the asialoglycoprotein receptor H1, take an indirect route to the plasma membrane via an intracellular, most likely endosomal intermediate. To define this compartment we developed a biochemical assay based on the very definition of endosomes. The assay is based on internalizing anti-H1 antibodies via the endocytic cycle of the receptor itself. Internalized antibody formed immune complexes with newly synthesized H1, which had been pulse-labeled with [(35)S]sulfate and chased out of the trans-Golgi for a period of time that was insufficient for H1 to reach the surface. Hence, antibody capture occurred intracellularly. Double-immunofluorescence labeling demonstrated that antibody-containing compartments also contained transferrin and thus corresponded to early and recycling endosomes. The results therefore demonstrate an intracellular intersection of the exocytic and endocytic pathways with implications for basolateral sorting.

Publisher Elsevier

ISSN/ISBN 0014-4827

edoc-URL <http://edoc.unibas.ch/dok/A5258057>

Full Text on edoc No;

Digital Object Identifier DOI 10.1006/excr.2000.5006

PubMed ID <http://www.ncbi.nlm.nih.gov/pubmed/11035929>

ISI-Number WOS:000165205700018

Document type (ISI) Journal Article