Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells

Patrick Weber

Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells

Patrick Weber

Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells Patrick Weber
In this thesis simulation models have been developed and validated to investigate the protein-lipid interaction mechanisms at the trans-Golgi network (TGN) of mammalian cells. In two systems biological studies, ordinary differential equation models were used to examine the interactions between the lipids involved in the sphingomyelin synthase 1 reaction at the TGN and the proteins involved in the regulation of non-vesicular Endoplasmic reticulum to TGN ceramide transfer. These systems include the lipids ceramide, phosphatidyl choline, diacylglycerol and sphingomyelin and the proteins protein kinase D (PKD), phosphatidyl inositol-4-kinase III ss and ceramide transfer protein (CERT), respectively.

The final results comprise a quantitative model of this network, and a comparison of competing hypotheses regarding the mechanism of ceramide transfer. Major biological findings are that PKD and CERT work together in a cooperative manner to perform ceramide transfer by forming a positive feedback regulation. Important methodological side results of this thesis are a novel absolute quantification scheme for proteins via Western Blot data and a Bayesian experiment design method.

Download and Read Free Online Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells Patrick Weber

---

From reader reviews:

Bobby Griffin:

Why don't make it to become your habit? Right now, try to ready your time to do the important action, like looking for your favorite book and reading a e-book. Beside you can solve your problem; you can add your knowledge by the publication entitled Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells. Try to make book Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells as your pal. It means that it can being your friend when you truly feel alone and beside that of course make you smarter than previously. Yeah, it is very fortuned to suit your needs. The book makes you a lot more confidence because you can know every little thing by the book. So , we need to make new experience along with knowledge with this book.

Leona Hicks:

This Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells is great e-book for you because the content that is full of information for you who all always deal with world and also have to make decision every minute. This kind of book reveal it details accurately using great plan word or we can claim no rambling sentences inside. So if you are read that hurriedly you can have whole details in it. Doesn't mean it only provides you with straight forward sentences but tough core information with wonderful delivering sentences. Having Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells in your hand like finding the world in your arm, facts in it is not ridiculous one. We can say that no publication that offer you world in ten or fifteen minute right but this book already do that. So , this really is good reading book. Hey there Mr. and Mrs. hectic do you still doubt that?

Rosie Zimmerman:

A lot of e-book has printed but it differs. You can get it by world wide web on social media. You can choose the most beneficial book for you, science, comedian, novel, or whatever through searching from it. It is identified as of book Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells. You can contribute your knowledge by it. Without making the printed book, it can add your knowledge and make an individual happier to read. It is most important that, you must aware about e-book. It can bring you from one destination to other place.

Edward Sullivan:

Reading a publication make you to get more knowledge from it. You can take knowledge and information coming from a book. Book is prepared or printed or illustrated from each source in which filled update of news. On this modern era like currently, many ways to get information are available for you. From media social such as newspaper, magazines, science publication, encyclopedia, reference book, new and comic. You can add your knowledge by that book. Are you ready to spend your spare time to open your book? Or just in search of the Data-driven modeling of molecular interactions at the trans-Golgi network of

mammalian cells when you required it?

Read Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells by Patrick Weber for online ebook

Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells by Patrick Weber Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells by Patrick Weber books to read online.

Online Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells by Patrick Weber ebook PDF download

Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells by Patrick Weber Doc

Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells by Patrick Weber Mobipocket

Data-driven modeling of molecular interactions at the trans-Golgi network of mammalian cells by Patrick Weber EPub