



TOR and GSK3 in the ciliate Paramecium tetraurelia

By Tatyana Svinkina

LAP Lambert Academic Publishing Jun 2012, 2012. Taschenbuch. Book Condition: Neu. 220x150x20 mm. This item is printed on demand - Print on Demand Neuware - Target of rapamycin (TOR) is a serine threonine kinase that regulates cellular processes in response to the stresses and nutrients in the environment. We investigated TOR signaling pathway in the ciliate Paramecium tetraurelia (P. tetraurelia). Using BLAST (Basic Local Alignment Search Tool) we identified orthologs of the mammalian TOR, LST8, Akt, Rheb, Rag A/B, Rag C/D, SNAT2, Tap42, S6K, PKA and GSK3 in the P. tetraurelia. With RNA interference technique we established that depletion of these orthologs reduced cellular proliferation and arrested cells between G1 and S stages of the cell cycle. Furthermore, GSK3 depletion produced round looking cells with short, sparse cilia, and GSK3 was localized to the pellicle and cilia of P. tetraurelia. In addition to these investigations, we determined that inhibition of PKA with H89 prevented re-growth of cilia in de-ciliated cells. Our results possibly suggest that GSK3 and PKA work together in the regulation of ciliary length and /or assembly in P. tetraurelia. We also hypothesize that these regulations are TOR dependent. 340 pp. Englisch.



READ ONLINE
[3.31 MB]

Reviews

This publication may be really worth a go through, and a lot better than other. It really is written in simple terms and never difficult to understand. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- **Natalie Abbott**

This book will not be simple to get going on reading but extremely exciting to read through. Yes, it can be play, still an interesting and amazing literature. I am very easily could possibly get a delight of reading a written book.

-- **Rene Olson**