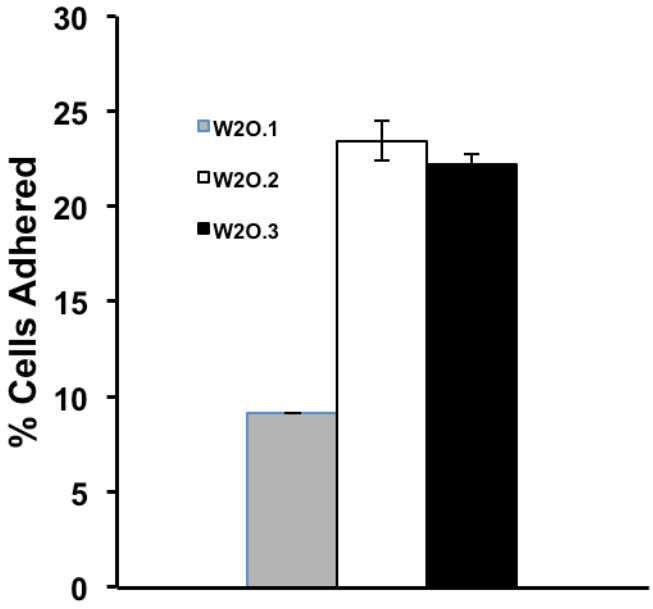
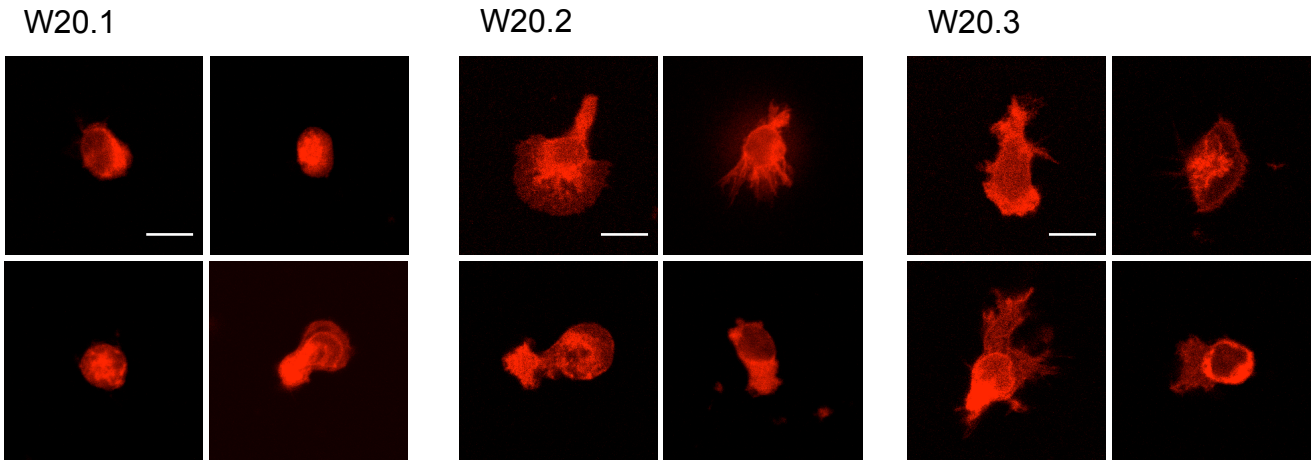
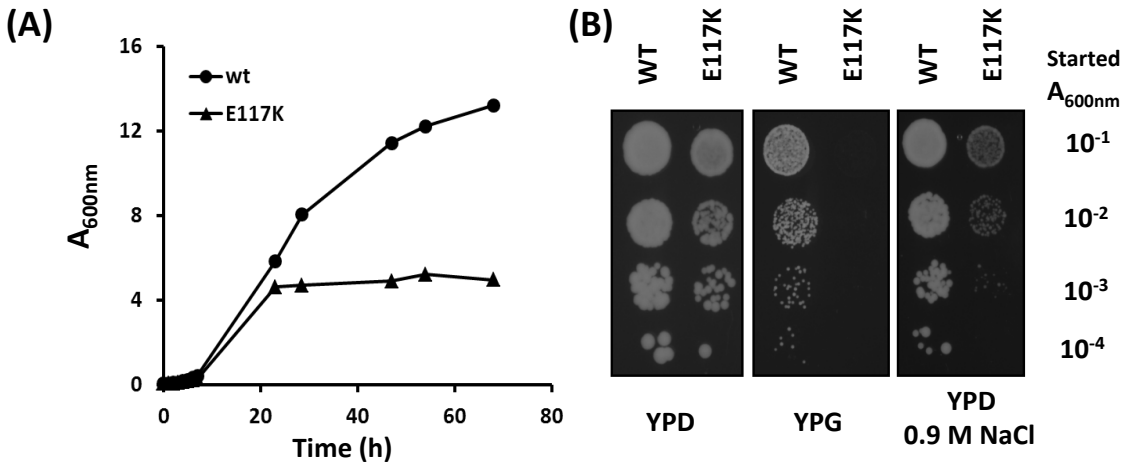


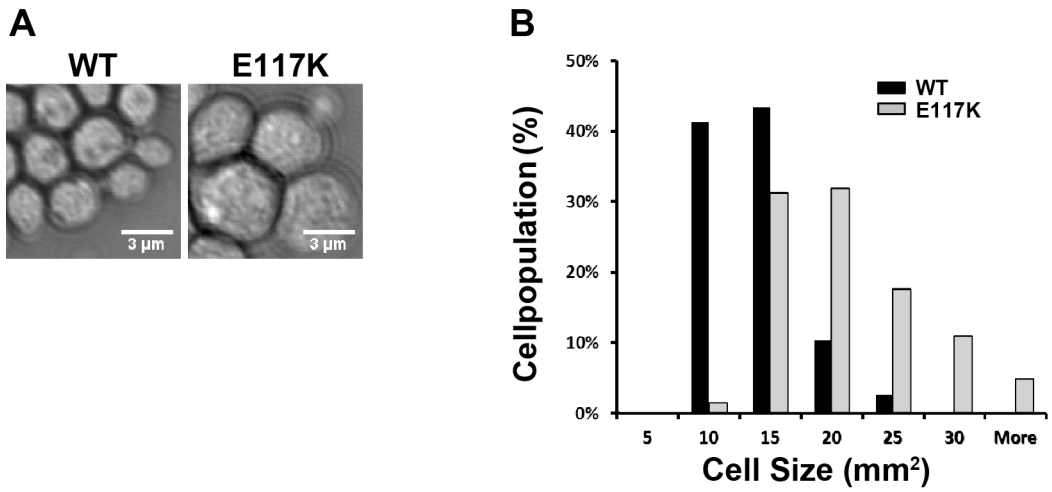

Supp. Figure S1. Effects of the p.E117K actin mutation on lymphocyte adhesion to a fibronectin surface. 100,000 cells from the patient (W20.1, n=4) and the parents (W20.2 and W20.3, n=3, each) were plated onto a fibronectin-covered surface as described in the methods. Following an initial adherence period, the layers were gently washed with PBS, and residual cells from 15 fields were counted. The bar graph shows the percent cells adhering from each sample.



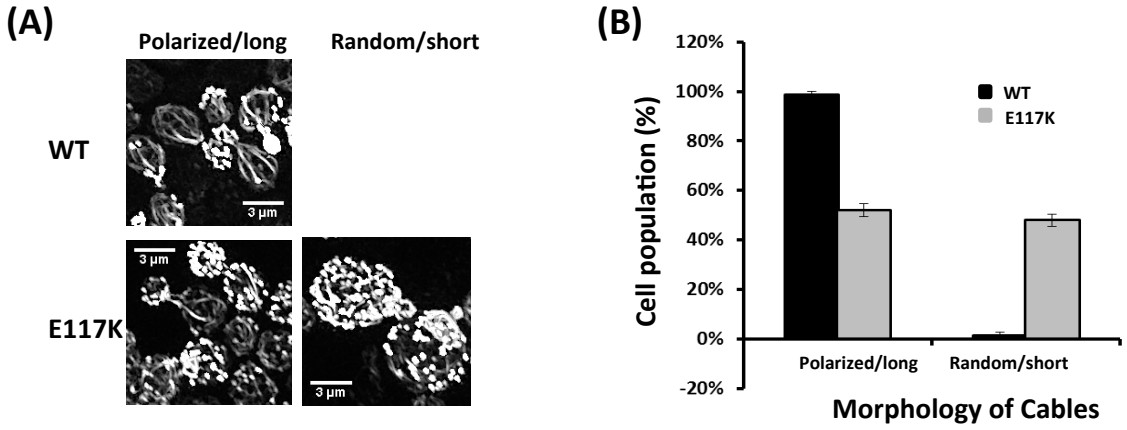

Supp. Figure S2: Effects of the p.E117K actin mutation on lymphocyte protrusion. Cells from the patient (W20.1) and the parents (W20.2 and W20.3) were plated onto fibronectin-surfaces. The cells were allowed to adhere for 2 days, after which the cells were fixed, stained for actin, and the actin cytoskeleton was visualized. Scale bar = 10 μm, all images shown at same magnification.



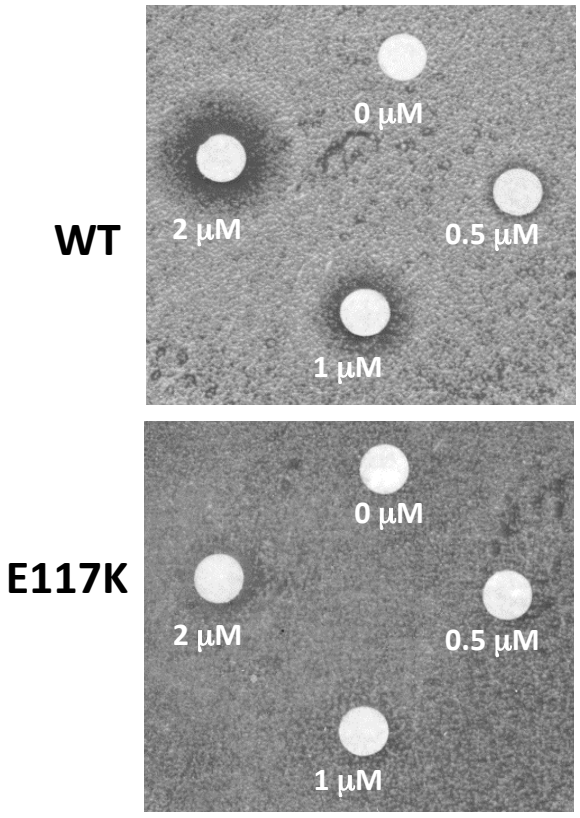

Supp. Figure S3. Effect of the p.E117K actin mutation on growth of *S. cerevisiae*. A: Haploid WT cells and cells expressing only the E117K mutant actin were inoculated into rich liquid medium (YPD) at 30 °C into shaking flasks, and growth was followed by the increase in A600 over time. B: The effect of the mutation on growth of cells under suboptimal conditions on agar plates was assessed. For each condition, a serial dilution was plated and growth was observed over 48 hrs. Shown are the colonies at the end of this period. For all conditions, growth was at 30 °C. YPD is normal rich medium. YPG is YPD with the dextrose substituted by 2% glycerol. YPD + 0.9M NaCl is hyperosmolar medium.




Supp. Figure S4. Effect of the p.E117K mutation on yeast cell size. A: Micrographs showing the morphology of WT and E117K cells. B: Distribution of cell size for WT and E117K cells. The distributions were based on a total cell count of 150 cells for each histogram. The data shown are representative of two independent determinations.




Supp. Figure S5. Effect of the p.E117K mutation on yeast actin cytoskeletal morphology. Actin cytoskeletons in fixed cells were visualized by Alexis 488 phalloidin as described in the methods. 250 WT and E117K cells were analyzed. A: Micrographs of the stained cells. B: Bar graph depicting the percentage of normal cells (polarized/long filaments) vs. abnormal cells (random distribution/short filaments) in each sample.




Supp. Figure S6: Effect of the p.E117K mutation on the sensitivity of yeast to latrunculin A. 100 μl of log phase yeast at an A600 of 0.1 was spread on a YPD agar plate. Whatman filter discs, 0.5 cm in diameter containing 2 μl of latrunculin A at the designated concentration in DMSO were applied to the plate, and the cells were allowed to grow at 30 °C for 48 hrs. The figure depicts cell growth at the end of this time.