SDS22 encodes a leucine-rich repeat protein that is a positive regulatory subunit of protein phosphatase type 1. Sds22p forms a stable 1:1 complex with Glc7p, and is required for normal nuclear localization of Glc7p. Sds22p and Glc7p appear to be involved in regulating microtubule-related functions, and seem to function in an interdependent manner. Sds22p/Glc7p complexes appear more abundant in early stationary phase extracts than in exponential phase extracts, but SDS22 expression appears continuous throughout the cell cycle. SDS22 is an essential gene, and roughly 60% of Sds22p-depleted cells arrest in the large-bud stage of the cell cycle, with approximately 7% of the Sds22p-depleted cells being multinucleate or aploid. Some Sds22p-depleted large-budded cells also exhibit abnormal spindle structures. Some temperature-sensitive loss-of-function sds22 mutations confer a chromosome loss phenotype at higher growth temperatures. SDS22 is the budding yeast homologue of Schizosaccharomyces pombe sds22 and human SDS22.