

Eukaryotic chromosomes, being linear, are prone to hazardous consequences of chromosomal shortening, chromosomal circularization, chromosomal loss or non – homologous inter chromosomal recombination events with each cell cycle owing to the inherent nature of DNA replication and Repair process. In order to maintain proper chromosomal fidelity, cells employ intricate mechanisms to maintain telomeres which are complex in both space and time. Rap1 has been extensively studied as one of the most conserved telomeric factor which is necessary to maintain telomere heterochromatization, telomere position effect (TPE) and telomere identity by recruiting the Shelterin complex in eukaryotic cells. Here we report Rap1_N as an alternatively spliced form of the telomeric regulator, Rap1 in *Schizosaccharomyces pombe*. This isoform was first observed in the mutant of an intron – specific splicing factor, Sde2. Interestingly, Rap1_N became apparent in wild type scenario under heat stress at 37°C. On further functional analysis, it seems that Rap1_N acts as an independent backup telomeric silencing factor which becomes critical in times of stress when other factors might be compromised.