



**FIGURE 2** Evolution of the epidemic in the absence of NPI  $v = 0$ , for  $1/\gamma = 200$  (blue), 400 (green) and compared to a model without reinfection ( $\gamma = 0$ , red dashed curve). (a) active cases per 100,000 (b) and cumulative cases per 100,000. The initial conditions is  $(S(0) = N - 1, E(0) = 0, I(0) = 1)$ . Parameters values are  $\beta = 1.2$ ,  $k = 0.27$ , and  $\alpha = 0.67$ .