## Supplementary Text S2: Changing the Variance and Maintaining Early Responder Percentage

The initial *DDX58* concentration is distributed according to a log-normal distribution. The activation of *IFNB1* in infected cells depends on the concentration of *DDX58* according to a Michaelis-Menten term . The parameter  determines the critical concentration of *DDX58* that activates the cell. When reducing the variance of the log normal distribution, we also decrease the value of  so that the probability of any cell having a concentration of *DDX58* larger than  remains constant, thus roughly maintaining the same percentage of early responder cells. A log-normal distribution is defined by , where  and  are the mean and variance of , and its cumulative distribution function is , where  is the complementary error function. Denoting the mean and variance of the log-normal distribution by  and  respectively we get  and . We want to change  while keeping both  and constant, which translates to keeping . Replacing  and  above we get . The constant *C* can be determined by the original values of ,  and .