**Supplementary Note 1.**
Under the same conditions, the fluorescence intensity ratio λ between each individual green (*g*) and red (*r*) dye is constant (λ = *g/r*). The green and red fluorescence intensities (*G* and *R*, respectively) of a microbead bound with *n* nanobarcodes are calculated by formulas *G = n x (a x g)* and *R = n x (b x r)*, respectively. The total fluorescence intensity ratio (*K*) between red and green fluorophores (*K = R/G*) can be used to calculate the code number, *a/b*, using the formula *a/b = 1/(Kλ)*. When G and R are measured using flow cytometry, *K* can be calculated with the equation: log(*G*) = log(*R*) - log(*K*), where log(*K)* is the intercept of a two-color (green-red) flow plot. Thus the constant λ can be calculated with one known nanobarcode as a reference ($a_{ref}/b_{ref}$ is known) using the formula: λ = (1/$K_{ref}$) x ($b_{ref}/a_{ref}$). Once λ is determined, the code number of other nanobarcodes, *a/b*, can be obtained with the equation: *a/b = 1/*(*K*λ) = ($K_{ref}/K$) x ($a_{ref}/b_{ref}$), where *K* is derived from the flow plot. In our experiment, a known target DNA from *Francisell*a *tularensis*, coded by 2G1R (*i.e.,* $a_{ref}/b_{ref}$ = 2), was used as a reference to determine λ, as shown in **Figure 4a**. The measured value of $K_{ref}$ (*i.e.* $K_{2G1R}$) from **Figure 4a** was 22 and thus λ was equal to 1/44 (= 1/22 x 1/2). Based on the equation, *a/b = 1/(Kλ)*, the code number, *a/b*, for any other nanobarcodes, was equal to 44/*K*. Since *K* can be measured for each nanobarcode by the flow plot, the code number can be determined.