

## **Abstract**

We have developed a method for Enzymatic Sortase-assisted Covalent Orientation-specific Restraint Tether (ESCORT)-ing of recombinant proteins onto surfaces directly from celllysate. With an improved surface passivation method, we obviate the cumbersome purification steps even for single molecule studies that demand high purity in the sample. We demonstrated high-specificity of the method, high-passivity of the surface and uncompromised functional integrity of anchored proteins using single molecule fluorescence and force-mapping. This method would substantially reduce the investment by way of time, money and energy in the area of single molecule studies.