Multiplexed immunoassay based on micromotors and microscale tags

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Supporting Information

Videos

Video 1. Antibody-functionalized micromotors to detect ovalbumin, a stimulant of toxic proteins.

Video 2. Functional micromotors detecting multiple proteins.

Video 3. Antibody-functionalized micromotors picking up 3 and 4 µm wire-tagged target proteins. Unmodified micromotors or unmodified wires used as negative control.

Video 4. Multiple detection of proteins tagged with microobjects of different sizes and shapes.

Video 5. Multiplexed detection of 4 μ m wire-tagged ovalbumin in the presence of IgG.

Video 6. Multiplexed detection of 2 µm wire-tagged IgG in the presence of ovalbumin.



S.I. Figure 1. An anti-IgG modified micromotor approaching (left), contacting (center), carrying (right) a 4 μ m wire-tagged IgG protein (a) and bypassing a 2 μ m unmodified wire (b) vs a 2 μ m unmodified wire c), as negative controls respectively. Modified and unmodified wires are highlighted with a doted circle and the captured wire-tagged protein with an arrow. Scale bar, 10 μ m. Sketch of the modified micromotor, 4 μ m wire-tagged IgG and 4 μ m unmodified wire are shown on the right side of the figure. Motion conditions, 1X PBS solution pH 7.4, containing 3% H₂O₂ and 5% NaCh.