



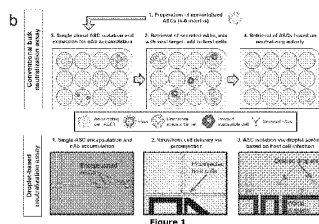
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(54) **Title:** MICROFLUIDIC ASSAYS AND USES THEREOF

(57) **Abstract:** The present disclosure concerns a microfluidic method of assaying antibody secreting cells (ASCs), comprising the steps of isolating ASCs within droplets such that each droplet encapsulates only one ASC; incubating the droplets of step a) to accumulate antibodies within the droplets; picoinjecting virus into the droplets of step b) to form immune complex droplets; picoinjecting host cells into the immune complex droplets to form neutralised droplets and infected droplets; and sorting the infected droplets from the neutralised droplets, based on infection of the host cells by the virus, to assay the ASCs within the neutralised droplets. The present disclosure also concerns a microfluidic platform thereof.



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