

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Assays & screens			
Single-molecule analysis of epigenetic markers	<p>Single-molecule analysis of epigenetic markers could help identify epigenome-based cancer biomarkers and monitor the effects of epigenome-modifying drugs. Existing approaches, including chromatin immunoprecipitation and bisulfite sequencing, only allow the direct identification of one marker at a time and a second one by association but not by direct observation. The single-molecule approach uses fluorescently labeled antibodies to target a specific epigenetic mark on intact chromatin and a microfluidic device to separate and detect the fluorescently labeled chromatin complexes. The technique was used to detect two epigenetic markers simultaneously and monitor their methylation levels following treatment with a DNA methyltransferase inhibitor. Next steps could include further refining the technique to enable simultaneous identification of three or more epigenetic markers.</p> <p>SciBX 6(19); doi:10.1038/scibx.2013.473 Published online May 16, 2013</p>	Patent and licensing status undisclosed	<p>Murphy, P.J. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online April 22, 2013; doi:10.1073/pnas.1218495110 Contact: Paul D. Soloway, Cornell University, Ithaca, N.Y. e-mail: soloway@cornell.edu Contact: Harold G. Craighead, same affiliation as above e-mail: hgc1@cornell.edu</p>