

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Assays & screens			
Radiohalogen label for improved tracking of therapeutic antibodies <i>in vivo</i>	<p>An ^{125}I-based radiohalogen probe with improved cell retention could aid preclinical biodistribution studies of therapeutic mAbs. A drawback of using iodine radionuclides to label and track mAbs is rapid diffusion of the label from cells following endocytosis and lysosomal degradation. To improve cellular retention of the label, an ^{125}I-labeled, 4-hydroxy-3-iodophenyl (HIP)-modified 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid (DOTA) group was synthesized and attached to the human HER2 (EGFR2; ErbB2; neu) antibody Herceptin trastuzumab. In a mouse xenograft model of breast cancer, the labeled Herceptin had higher retention levels than ^{125}I tyrosine-modified Herceptin, although comparable levels of the antibodies were detected in plasma. Next steps include generating further derivatives of the probe and evaluating the labeling method with additional therapeutic or diagnostic antibodies. Roche and its Genentech Inc. unit market Herceptin, a humanized mAb against HER2, to treat breast and gastric cancer.</p> <p>SciBX 6(46); doi:10.1038/scibx.2013.1332 Published online Dec. 5, 2013</p>	Patent application filed; may be available for partnerships and collaborations	Boswell, C.A. <i>et al. J. Med. Chem.</i> ; published online Oct. 16, 2013; doi:10.1021/jm401365h Contact: C. Andrew Boswell, Genentech Research and Early Development, South San Francisco, Calif. e-mail: boswell.andy@gene.com