

**Table 1**  
The pharmacokinetic profiles of mAb GNC92H2 formats.

	$t_{1/2}$ (mean $\pm$ S.E.M.)	$K_d$ ( $\mu$ M)
Cocaine	26.1 min <sup>a</sup>	–
IgG	12.1 $\pm$ 1.70 d	0.2–0.002 <sup>b</sup>
F(ab') <sub>2</sub>	302 $\pm$ 21.6 min	nd <sup>c</sup>
Fab	73.9 $\pm$ 11.5 min	0.1
scFv	17.9 $\pm$ 1.79 min	2–0.4 <sup>d</sup>

<sup>a</sup> Norman et al. (2007).

<sup>b</sup> The binding affinity of GNC92H2 IgG for cocaine was measured via several methods: by equilibrium dialysis ( $K_d = 200$  nM), by competition ELISA for cocaine ( $K_d$ ,  $K_{app} \sim 13$  nM), and by the KinExA system ( $K_d = 2$  nM). Competition ELISA provides a semi-quantitative estimation of antibody binding affinity for an antigen, whereas KinExA (Sapidyne Instruments Inc.; Ohmura et al., 2001) measures the  $K_d$ ,  $K_{on}$ , and  $K_{off}$  binding constants in the *solution phase* to characterize bimolecular binding events. It thereby avoids the mass transport limitations and mobility effects inherent to traditional methods that measure binding events between a solution phase and a solid phase, and thus provides the *most accurate*  $K_d$  measure. This method was not used to characterize the other GNC92H2 fragments, whereas binding affinities of the IgG, Fab, and scFv formats were all estimated via equilibrium dialysis.

<sup>c</sup> Not determined.

<sup>d</sup> 92H2-scFv, isolated and purified via immobilized metal affinity chromatography and high performance liquid chromatography, or via immunoaffinity purification (Moss et al., 2003).

Norman AB, Tabet MR, Norman MK, Buesing WR, Pesce AJ, Ball WJ. A chimeric human/murine anticocaine monoclonal antibody inhibits the distribution of cocaine to the brain in mice. *J Pharmacol Exp Ther.* 2007 Jan;320(1):145-53

Ohmura N, Lackie SJ, Saiki H. An immunoassay for small analytes with theoretical detection limits. *Anal Chem* 2001;73:3392–9.

Moss JA, Coyle AR, Ahn JM, Meijler MM, Offer J, Janda KD. Tandem IMAC-HPLC purification of a cocaine-binding scFv antibody. *J Immunol Meth* 2003;281:143–8.