

## Supplementary Material

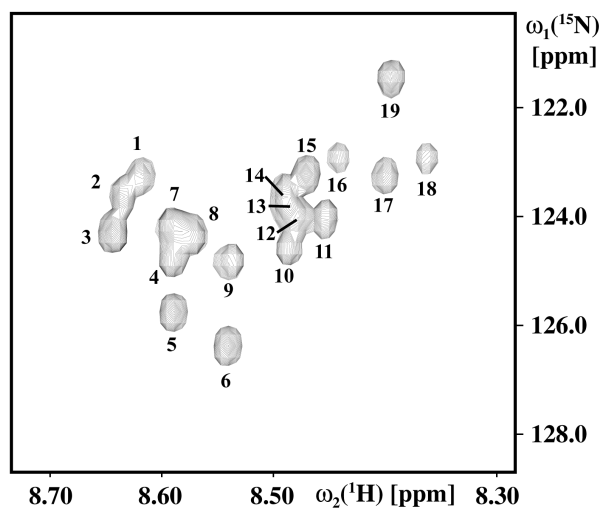


Fig. 5. 2D [ $^{15}\text{N}$ ,  $^1\text{H}$ ]-HSQC spectrum of [[ $^2\text{H}$ ,  $^{15}\text{N}$ ]-Leu, u~80%  $^2\text{H}$ ]-DHFR denatured in 6.6 M GuHCl, showing the arbitrarily numbered resonances from the 19 leucine backbone amide moieties (acquired data size 100\*1024 complex points,  $t_{1,\text{max}} = 25.0$  ms,  $t_{2,\text{max}} = 97.6$  ms, 64 scans per  $t_1$ -increment).