Supplemental Information

Probing heme active site of hemoglobin in functional red blood cells using resonance Raman spectroscopy

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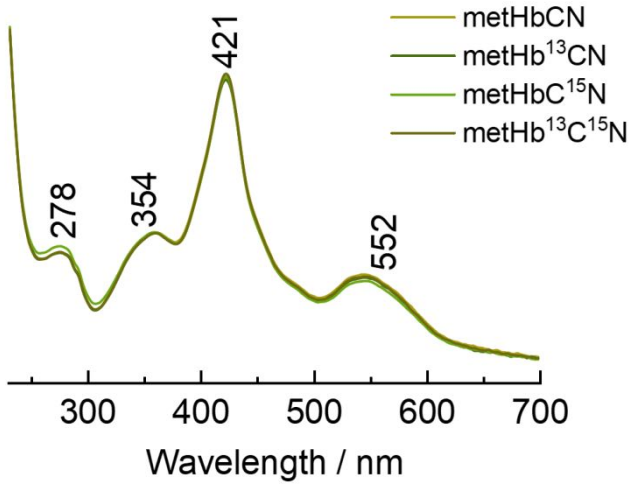

Fig. S1. The UV-Vis absorption spectra of HbCN isotopic derivatives ($Hb^{13}CN$, $HbC^{15}N$ and $Hb^{13}C^{15}N$).

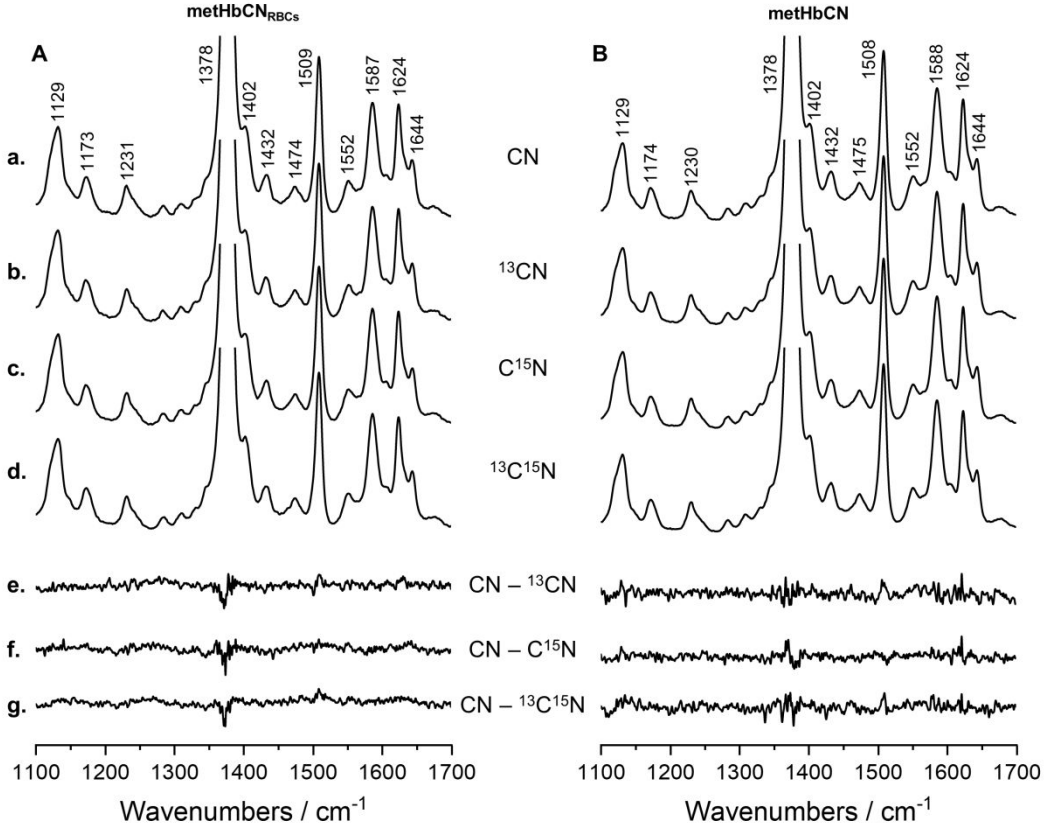

Fig. S2. rR spectra of RBCs rich in metHb (A) and isolated metHb (B) treated with potassium cyanide (a) and its isotopic analogues ($K^{13}CN$ – b, $KC^{15}N$ – c, $K^{13}C^{15}N$ – d) in 10-fold molar excess compared to the heme concentration. Spectra were recorded using 406.7 nm excitation line with power at the sample set approximately on 5 mW and are presented in middle wavenumber region (1100 – 1700 cm^{-1}) with appropriate difference patterns (e-g). All spectra were averaged from 3 independent experiments from 3 single spectra in total (1 spectrum per experiment). Acquisition time was equal to 5 min per spectrum (10 s and 30 accumulations).