

Supplementary Material for:

Protoporphyrin IX binds to iron(II)-loaded and to zinc-loaded human frataXin

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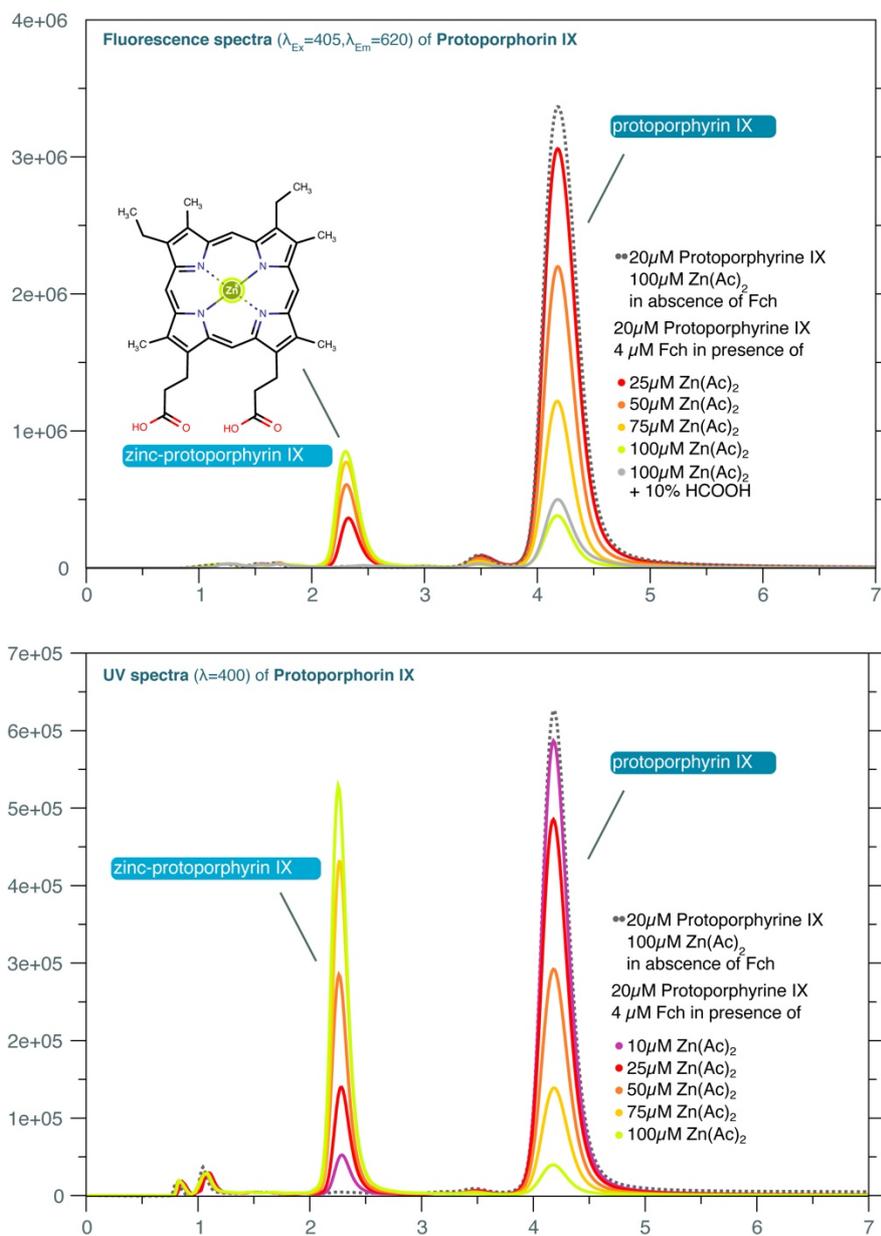


Figure S1. FECH enzyme activity assay. The chromatographic elucidation of Zn-PPIX and PPIX demonstrates FCH activity. In the absence of enzyme (dotted line) no Zn-PPIX is formed.

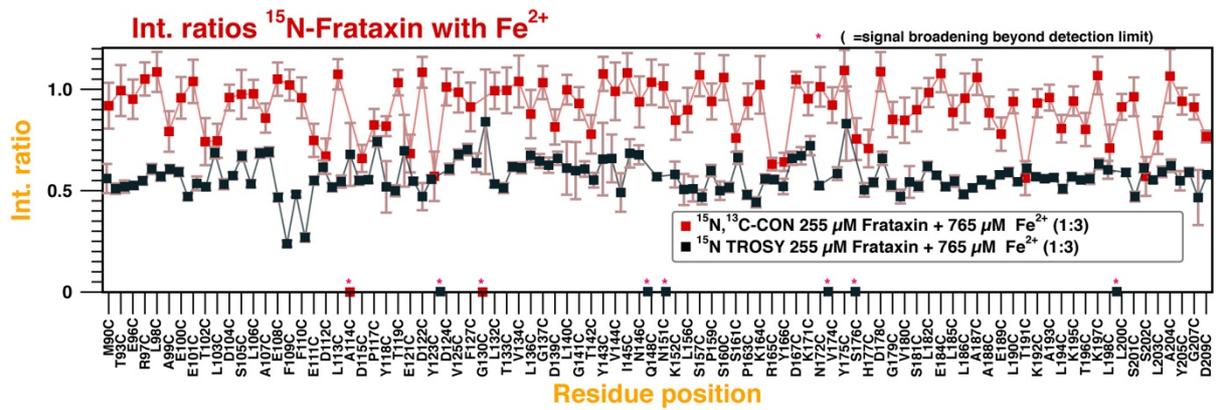


Figure S2. *FXN* intensity ratios upon Fe^{2+} binding. Residue dependent comparison of the intensity ratios for the ^{15}N -TROSY (black squares) with the CON experiment (red squares).

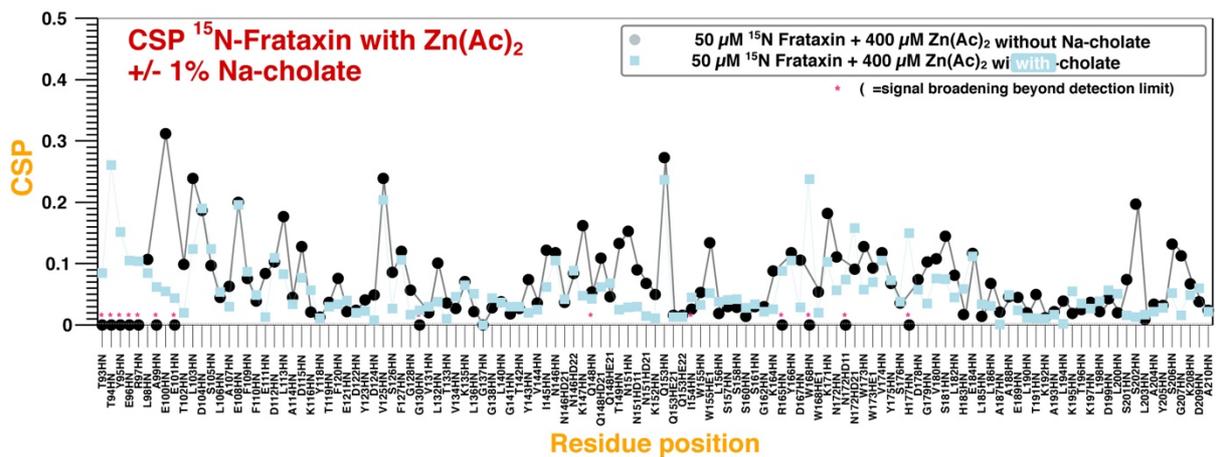


Figure S3. Effect of cholate in Zn^{2+} binding to *FXN*. Residue dependent comparison of the CSP induced by Zn^{2+} in the presence (blue squares) and in the absence (black circles) of 1% of sodium cholate.

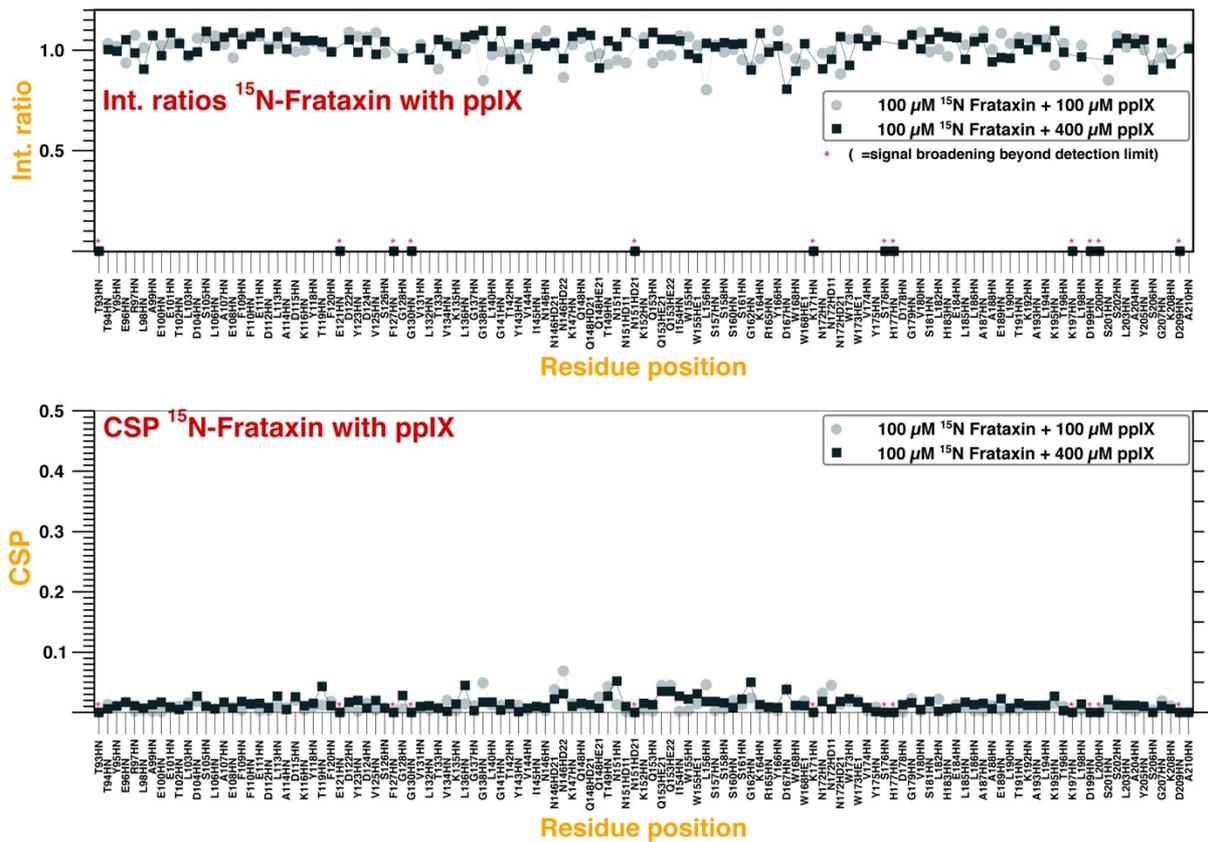


Figure S4. PPIX does not associate to apo-FXN. Changes in intensity (top) and CSPs (bottom) after the addition of 1 equivalent (gray circles) or 4 equivalents (black squares) of PPIX. Signals with a red asterisk showed a poor S/N (below 3) and they were not considered in the analysis.

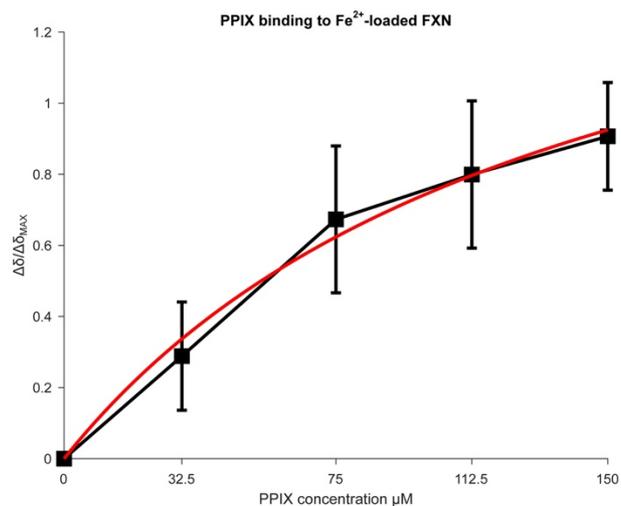


Figure S5. EC_{50} determination for PPIX association to Fe²⁺-loaded FXN. Experimental data (black) and best fitting to the PPIX titration to Fe²⁺-loaded (1 eq.) FXN (red curve).

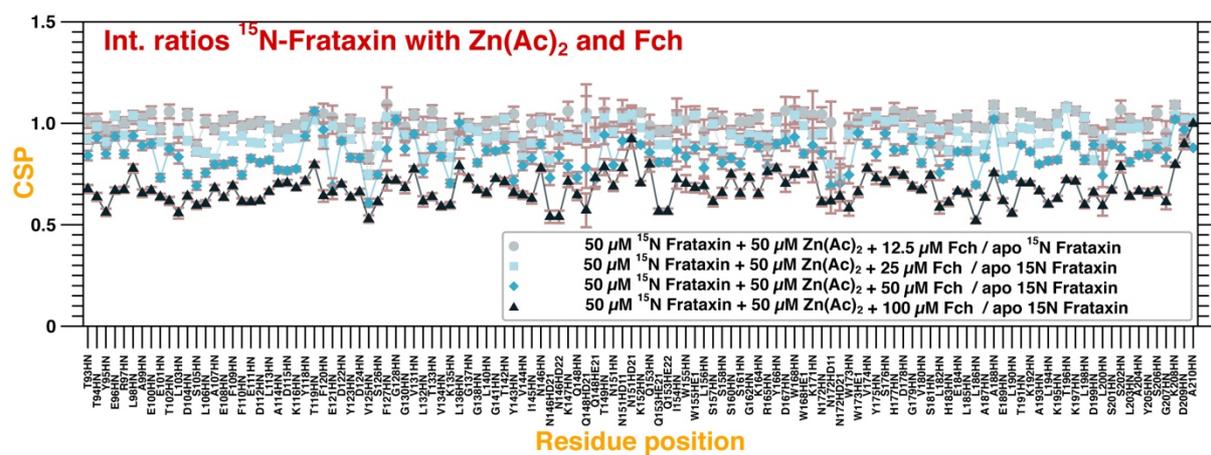


Figure S6. Zn^{2+} -loaded FXN intensity ratio as a function of FCH. The intensity ratios are coloured coded as indicated in the legend.