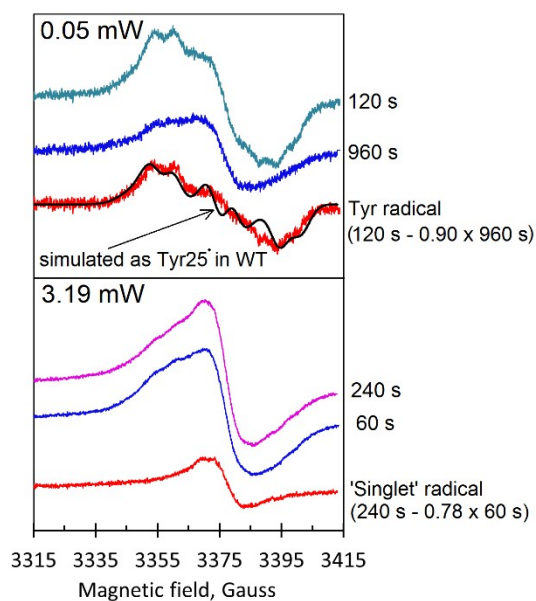


**Electronic Supplementary Information**

**Tyr25, Tyr58 and Trp133 of *Escherichia coli* bacterioferritin transfer electrons between  
iron in the central cavity and the ferroxidase centre**

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## Supplementary Figure



**Figure S1. Deconvolution of the free radical spectrum into two components.** The spectra of W133F presented in Figures 3 and 4 are used to extract a line shape of the tyrosyl radical (measured at 0.05 mW microwave power, Figure 3B) and a singlet EPR signal better detected at a higher power of 3.19 mW (Figure 4C). The formulas for obtaining the two spectra by subtraction with variable coefficient are indicated. The coefficients, 0.90 and 0.78, are found empirically. The Tyr25 radical spectrum simulated for the radical in the wild type protein<sup>1</sup> is overlaid with the difference spectrum proposed to originate from the same species in the W133F variant.

### Supplementary references

1. J. M. Bradley, D. A. Svistunenko, T. L. Lawson, A. M. Hemmings, G. R. Moore and N. E. Le Brun, Three aromatic residues are required for electron transfer during iron mineralization in bacterioferritin, *Angew. Chem. Int. Ed.*, 2015, **54**, 14763-14767.