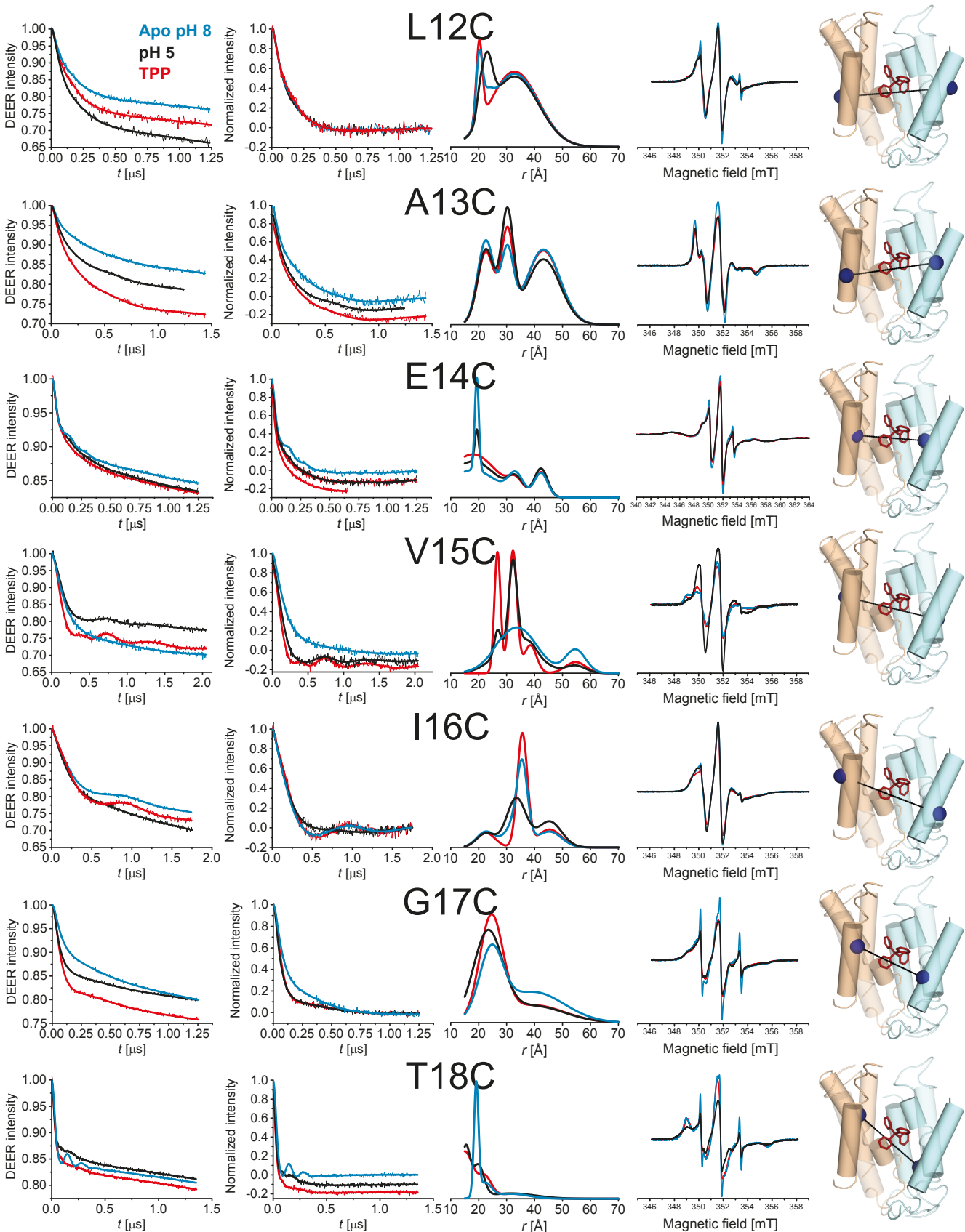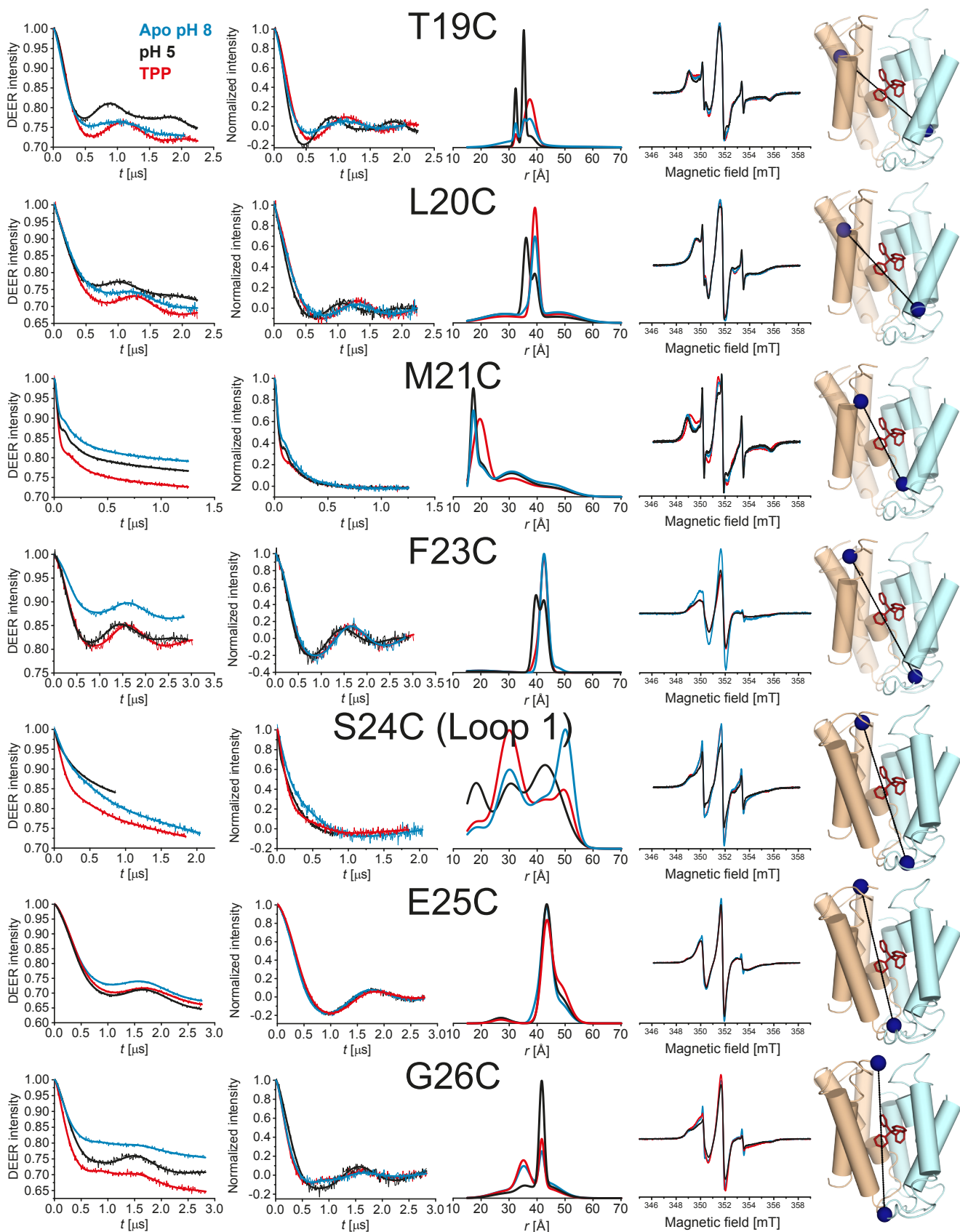**SI Appendix 1A. DEER data analysis for single-cysteine mutants in β-DDM micelles.** For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
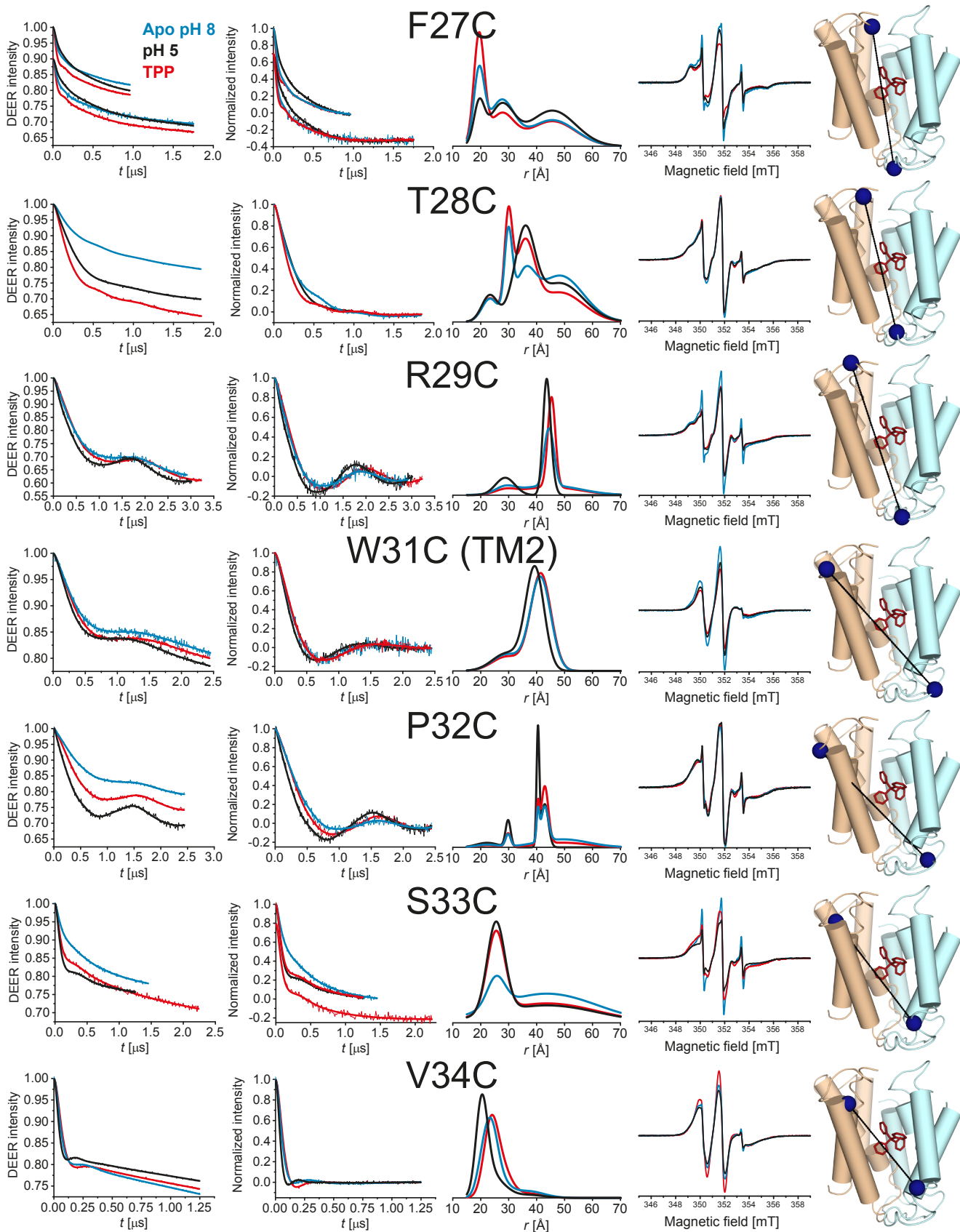
SI Appendix 1B. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
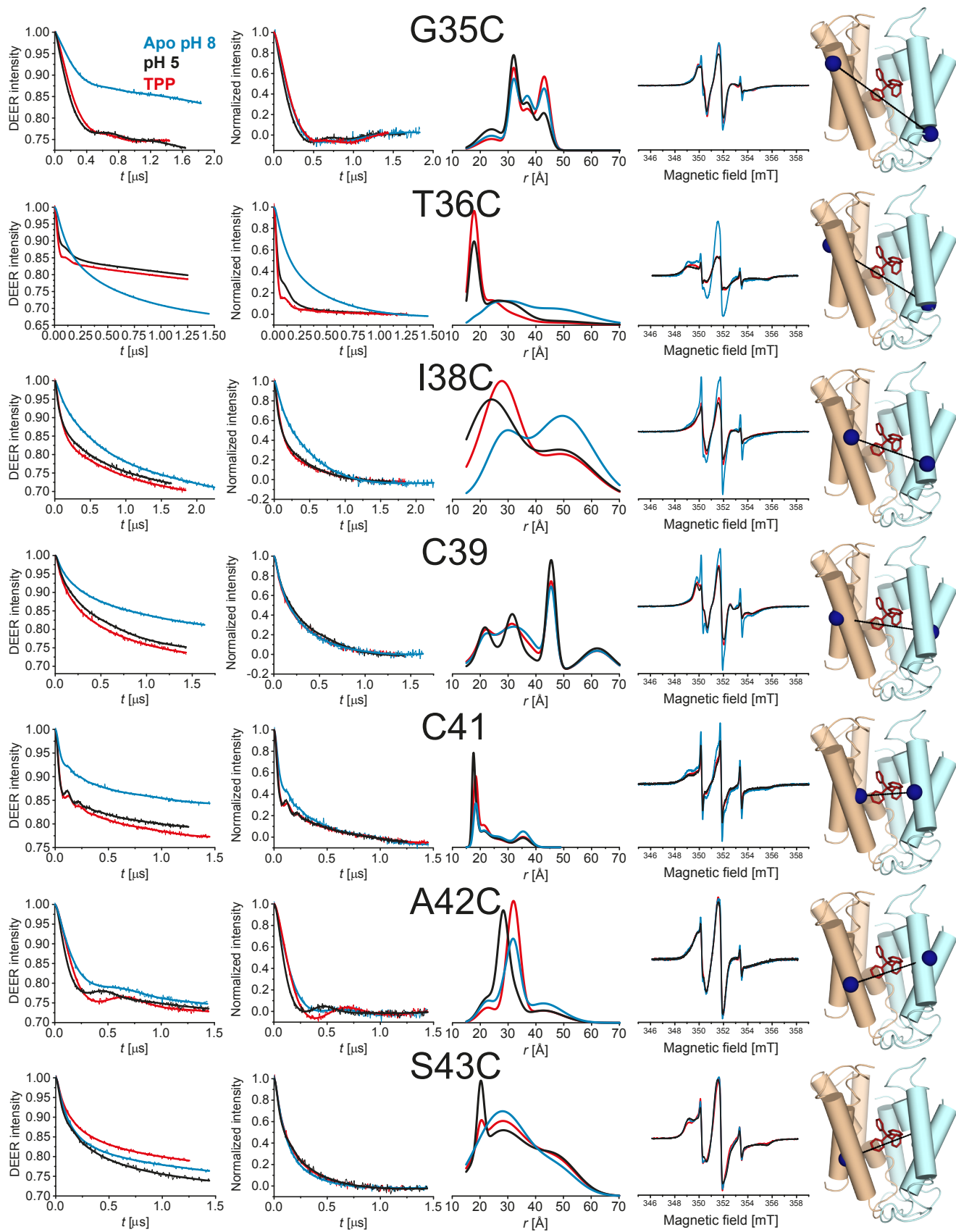
SI Appendix 1C. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
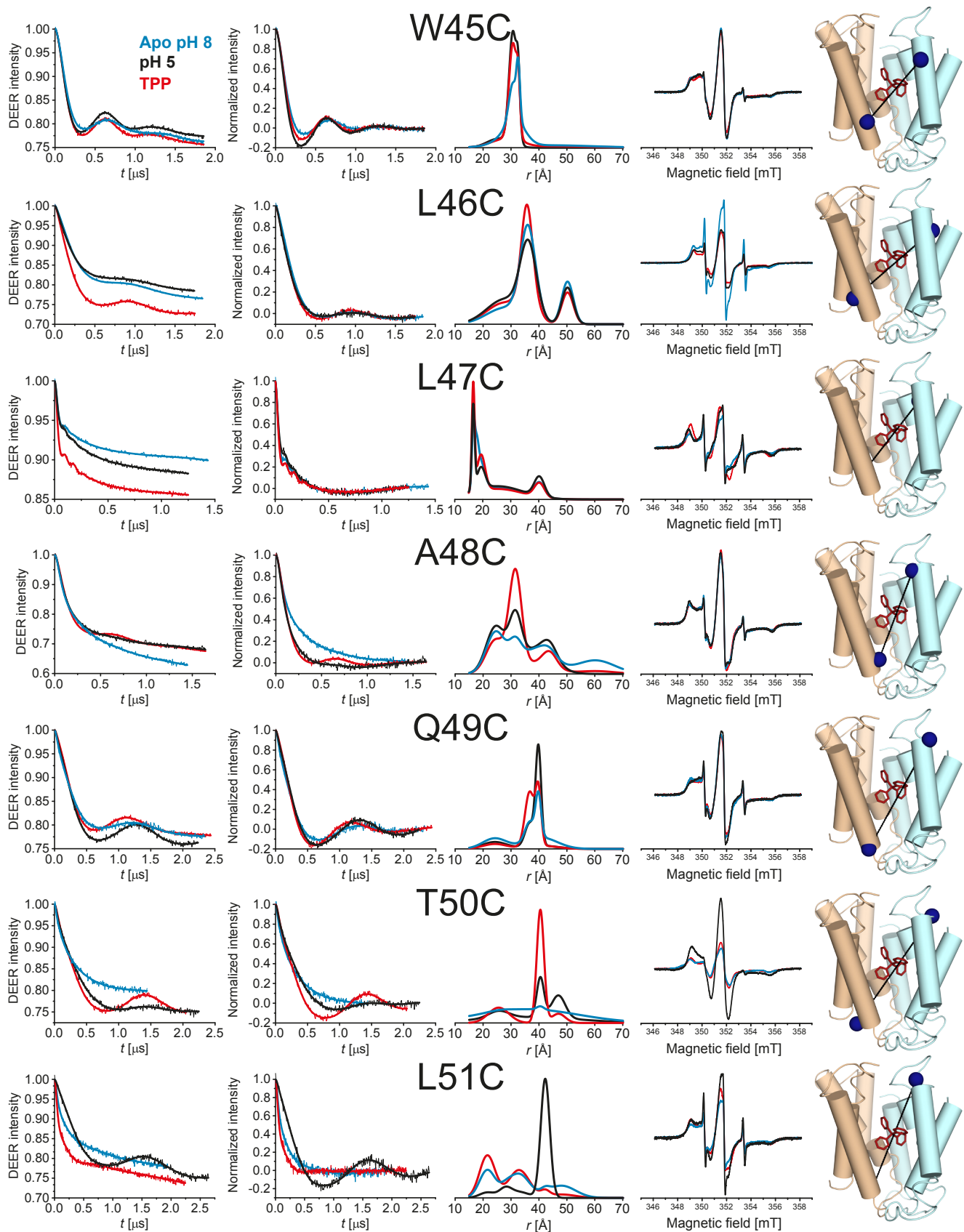
SI Appendix 1D. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
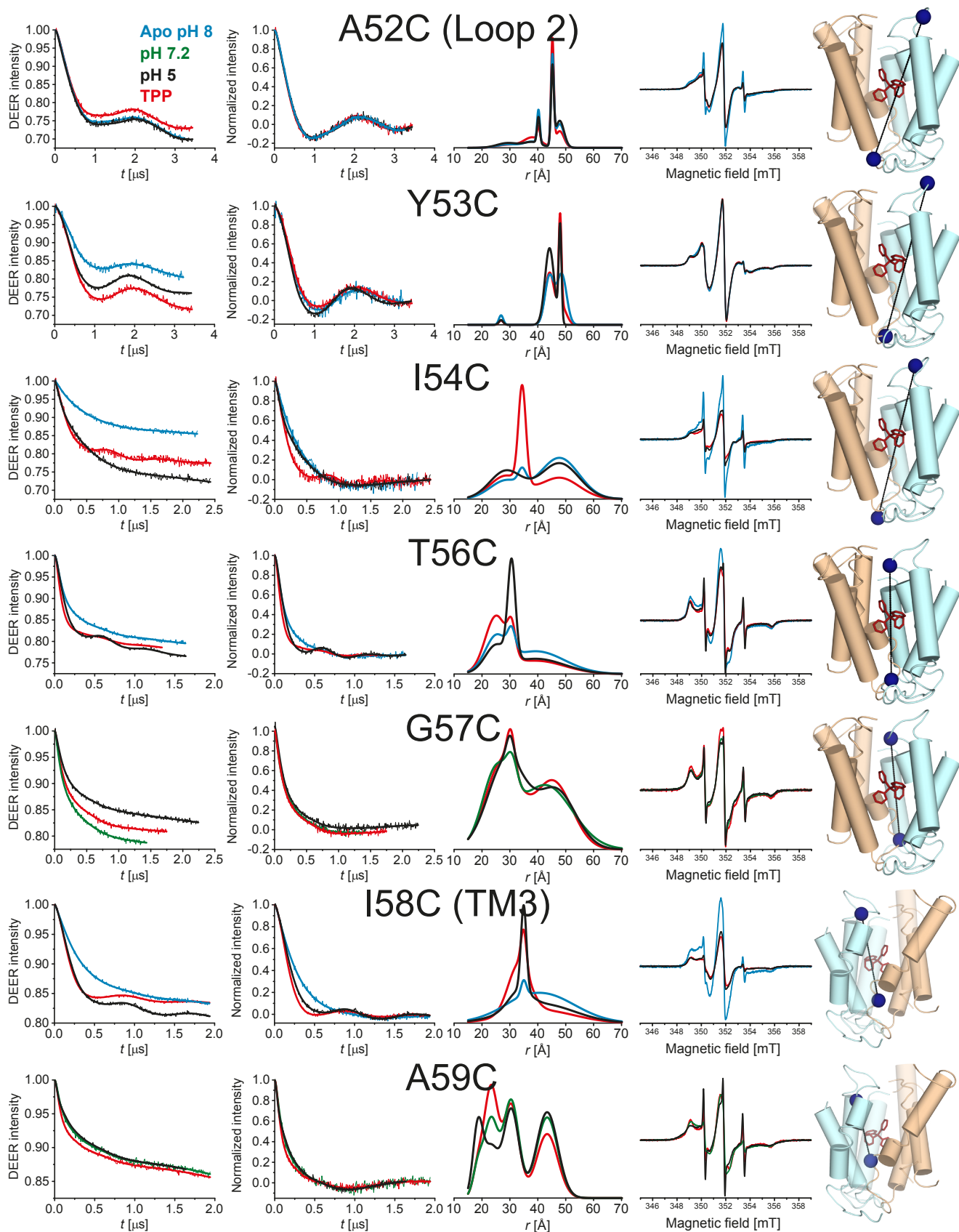
SI Appendix 1E. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
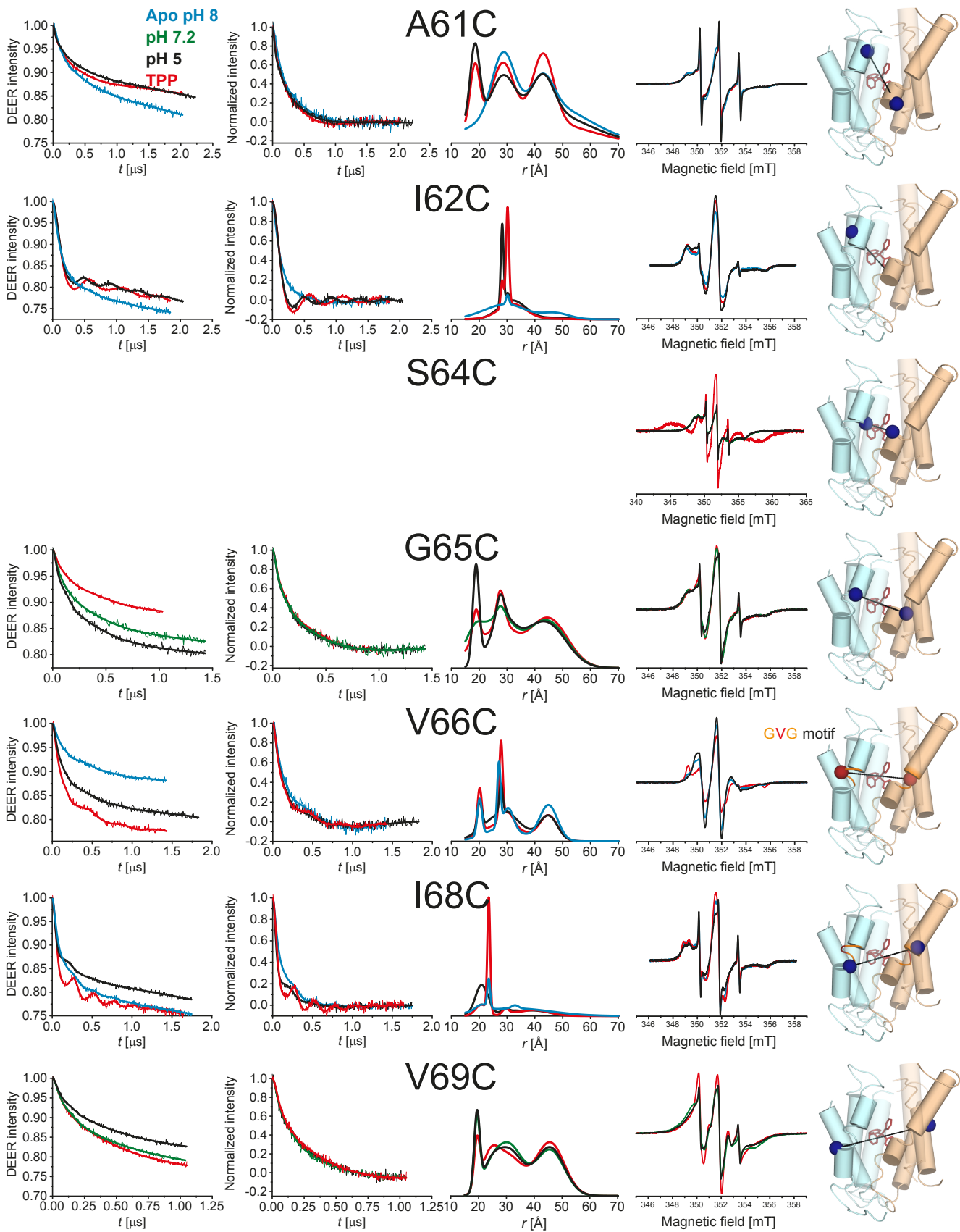
SI Appendix 1F. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
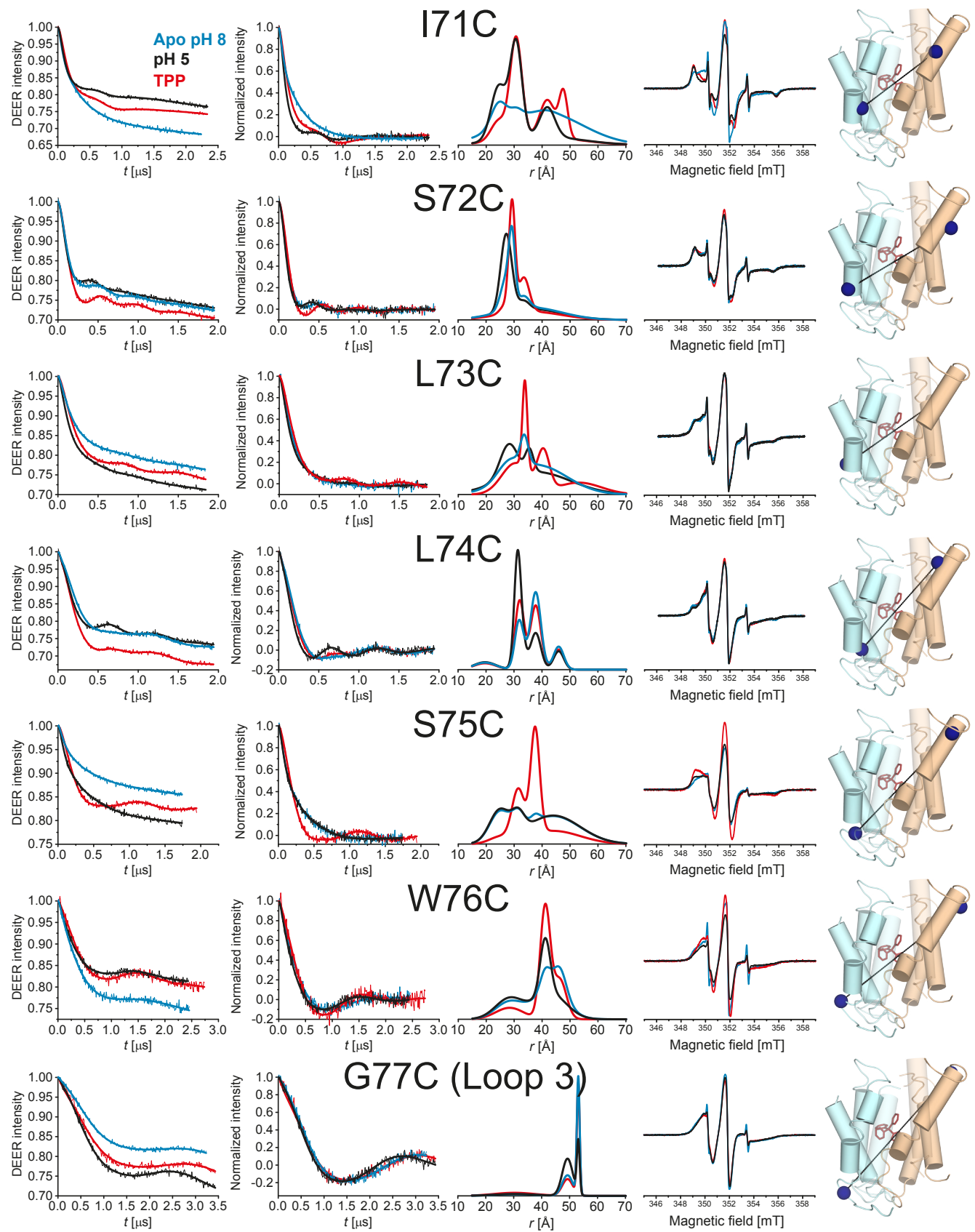
SI Appendix 1G. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
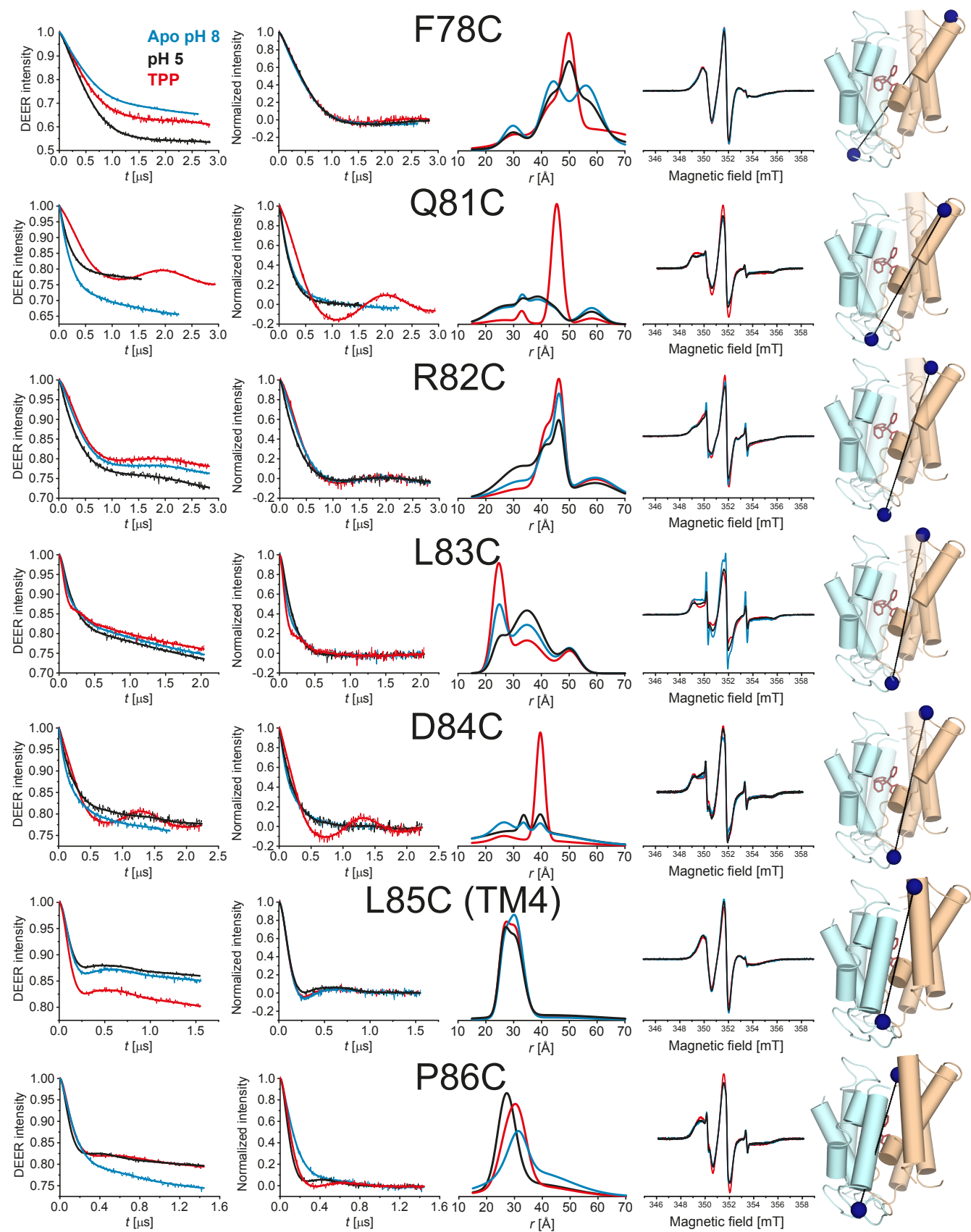
SI Appendix 1H. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
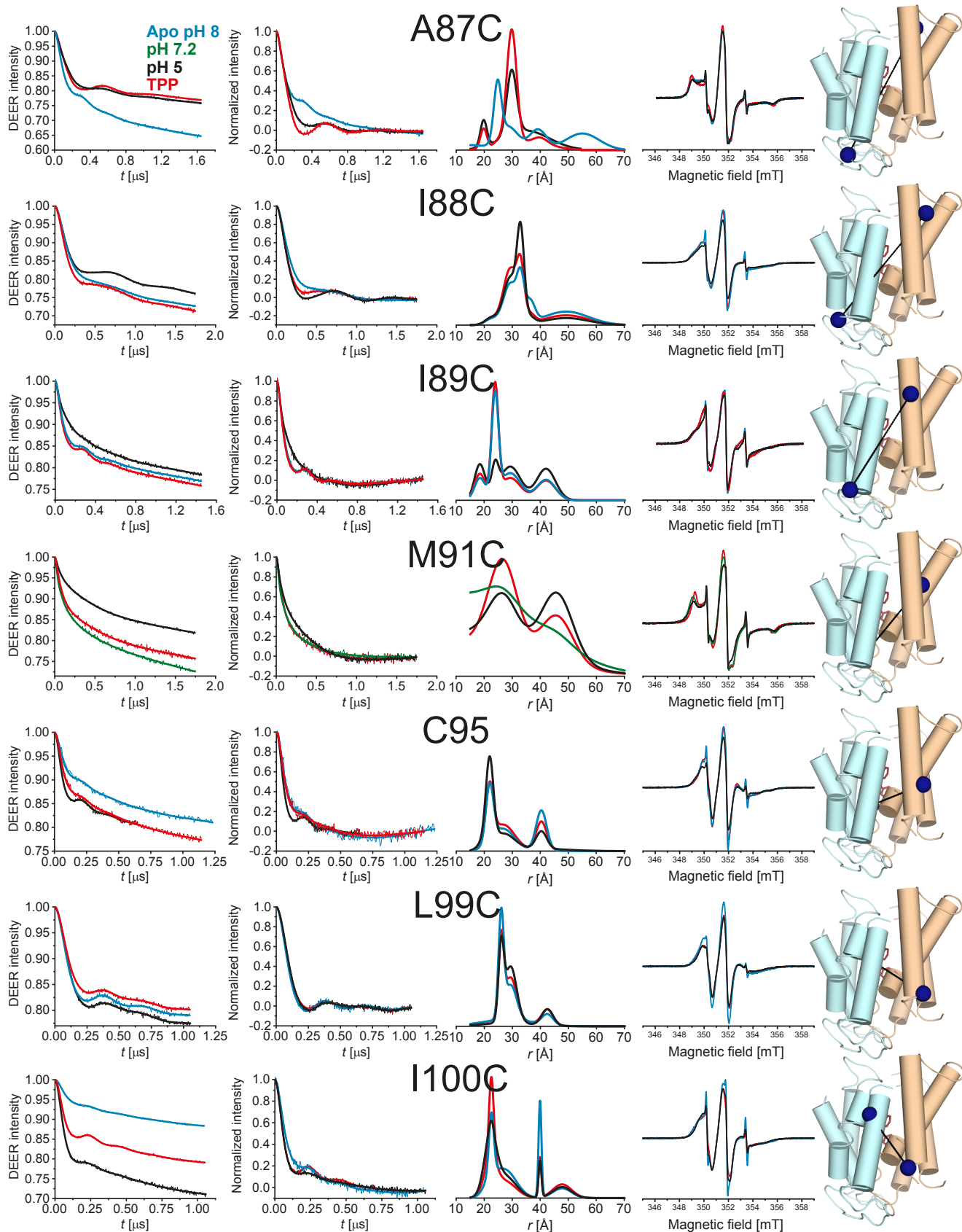
SI Appendix 1l. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.
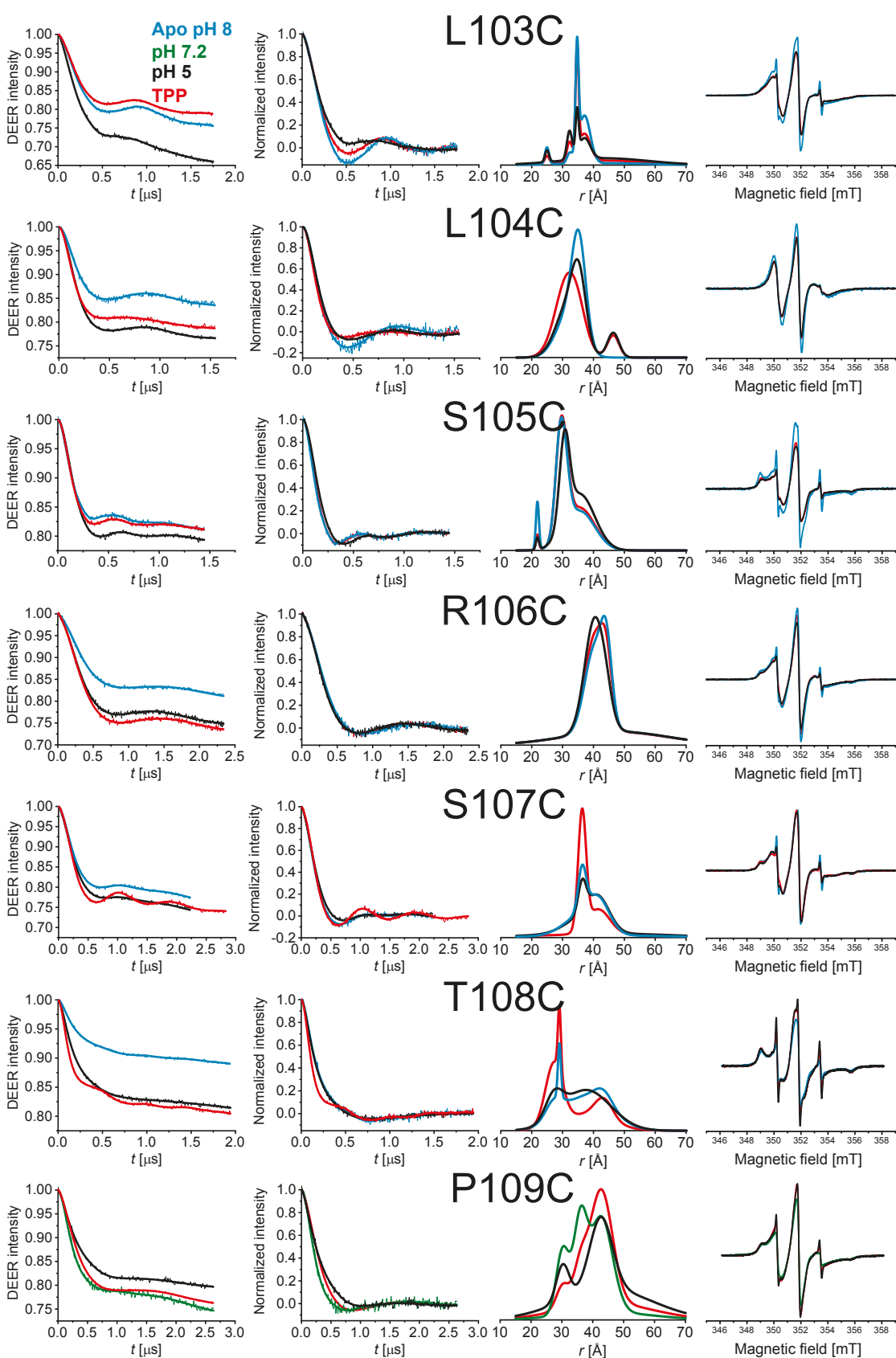
SI Appendix 1J. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.

SI Appendix 1K. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.

SI Appendix 1L. DEER data analysis for single-cysteine mutants in β-DDM micelles. For each mutant, from left to right, primary DEER traces with the corresponding fits, baseline-corrected and normalized DEER traces along with the fits, distance distributions, the CW-EPR spectra, and except for non-resolved residues, the position of the mutated residue on the X-ray structure (PDB code 3B5D) are shown.