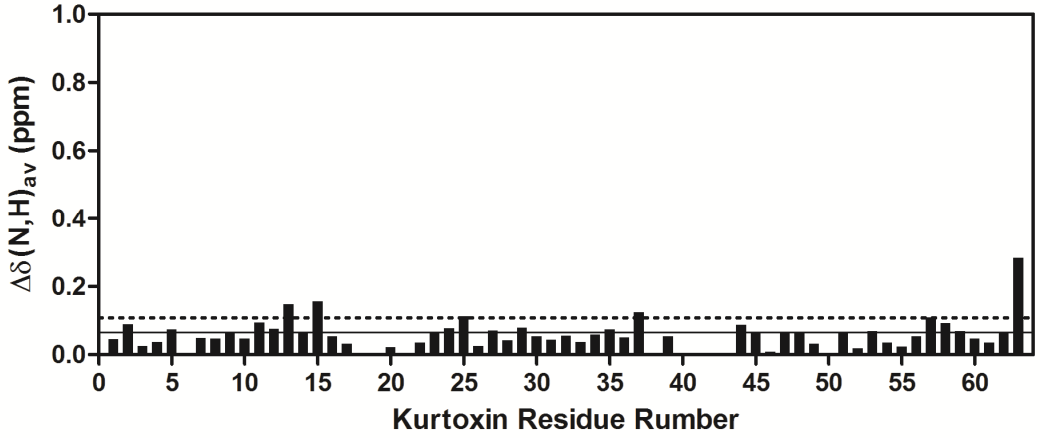
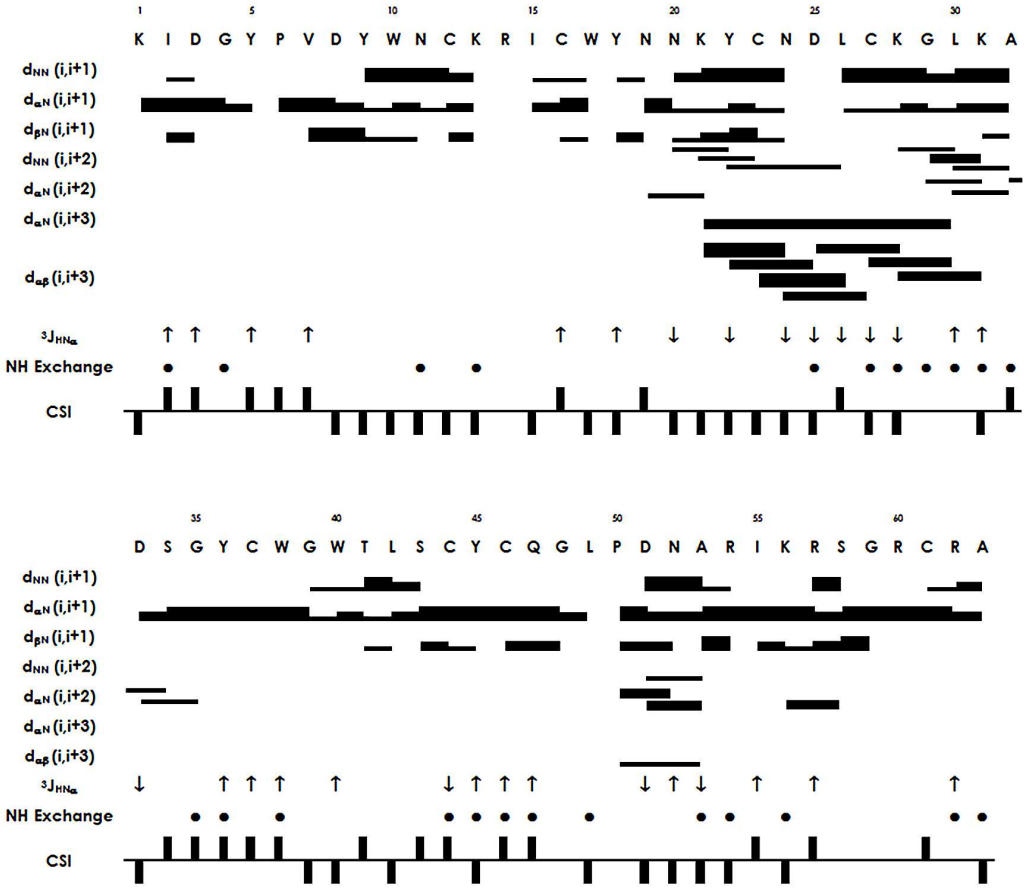
Supplementary Figure S1.



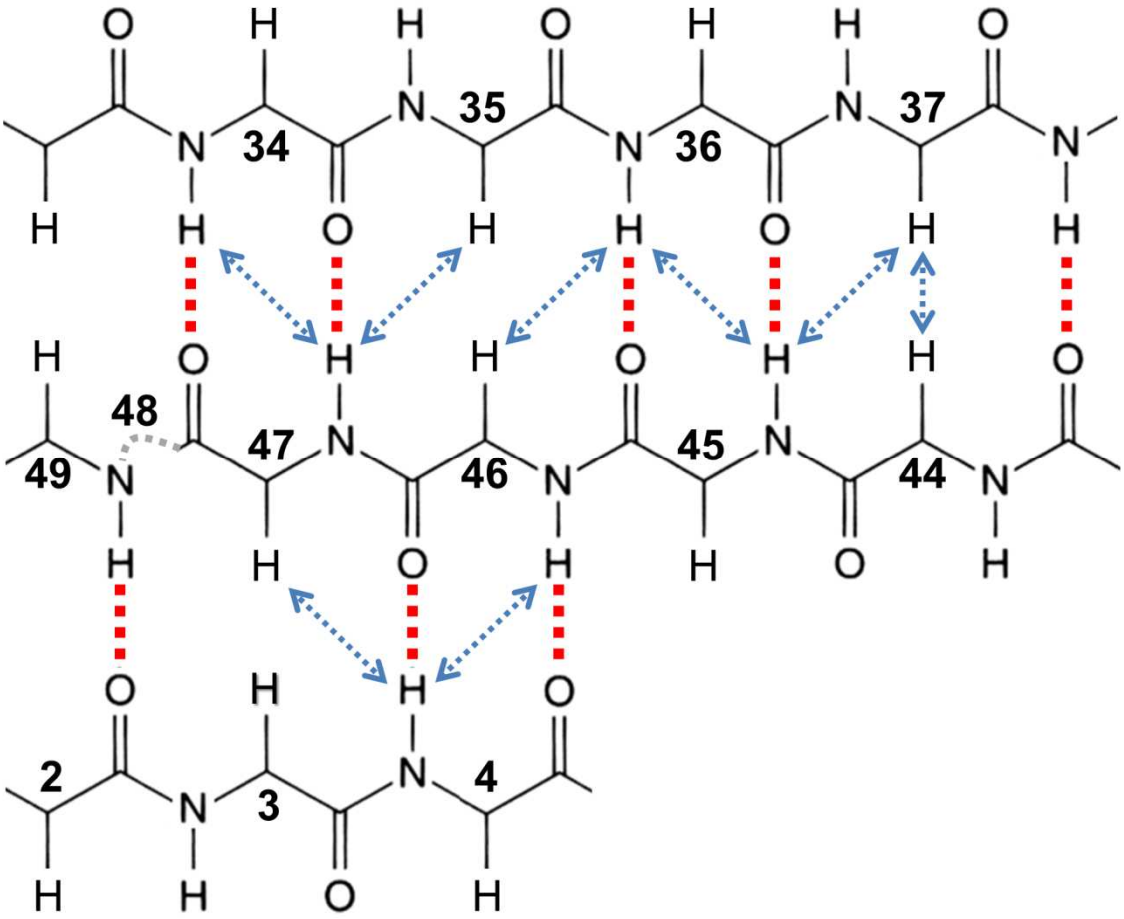
Supplementary Fig. S1. Histogram showing weighted average chemical shift changes ($\Delta\delta(N,H)_{av} = [(\Delta\delta_{NH})^2 + (\Delta\delta_N/5)^2]^{1/2}$) for kurtoxin amide resonances between in presence and absence of CD_3CN. The solid and dotted lines indicate the average value (0.06) and average plus one standard deviation value (0.11) of all residues of kurtoxin, respectively.

Supplementary Figure S2.



Supplementary Fig. S2. Summary of the sequential and medium range NOE connectivities, $^{3}J_{\text{NH-C}\alpha\text{H}}$ coupling constants, and slowly exchanging backbone NH protons observed in kurtoxin. These structural parameters were used for sequence-specific assignments and for identification of secondary structural elements. The sequential and medium range NOEs d_{NN}, $d_{\alpha\text{N}}$, $d_{\beta\text{N}}$, $d_{\text{NN}}(i, i+2)$, $d_{\alpha\text{N}}(i, i+2)$, $d_{\alpha\text{N}}(i, i+3)$ and $d_{\alpha\beta}$ $(i, i+3)$ are indicated by bars between two residues. The classification of NOEs as strong, medium or weak is indicated by the height of the filled bars. Values of the $^{3}J_{\text{NH-C}\alpha\text{H}}$ coupling constants are indicated by ↑(≥ 8 Hz) and ↓(≤5.5 Hz). Filled circles indicate backbone amide protons that were still observed in the TOCSY spectra after 25 h in D_2O. The chemical shift index is indicated by a ternary index with a value of –1, 0 or +1. Values of –1 and +1 indicate a shift deviation from the random-coil value of greater than 0.1 p.p.m. upfield and downfield, respectively; those within the range of the random-coil values are given a value of 0.

Supplementary Figure S3.



Supplementary Fig. S3. Schematic diagram of anti-parallel β-sheet structure of kurtoxin. Red dotted lines and blue dotted arrows indicate interstrand hydrogen bond and interstrand NOEs, respectively. The residues number is labeled on the Cα atoms.