

# Enantiomeric effect of D-amino acid substitution on mechanism of action of $\alpha$ -helical membrane-active peptides

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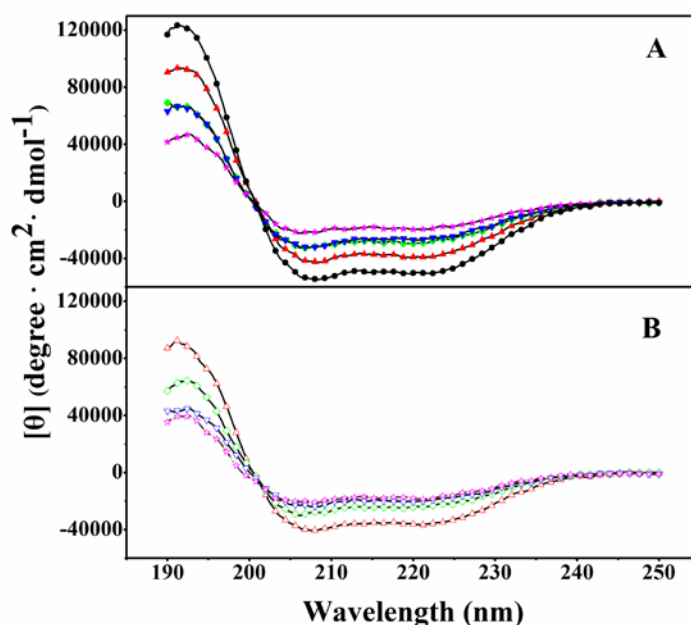
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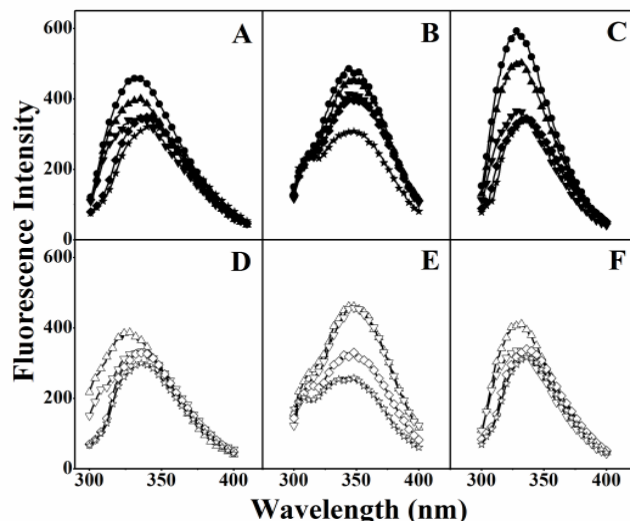
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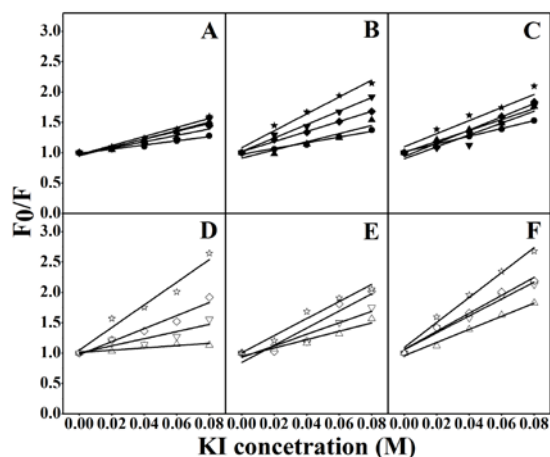
**Keywords:** membrane-active peptide, helicity, hydrophobicity, atomic force microscopy.



**Figure S1.** CD spectra of peptide analogs. Panels A and B denote the CD spectra of peptides in the KP buffer and 50% TFE, respectively. Symbols used are as follows: ● for V13K; ▲ for K14D; ▼ for S11D/K14D; ◆ for K14D/T15D; ★ for S11D/T14D/T15D; Δ for A12D; ▽ for F9D/A12D; ◇ for A12D/V16D; ☆ for F9D/A12D/V16D.



**Figure S2.** Tryptophan fluorescence emission spectra of peptides with three LUV model membranes at 25 °C. Panels A and D show spectra in LUVs mimicking eukaryotic cell membranes (PC/PG (7:3 w/w)); Panels B and E show spectra in LUVs mimicking normal cell membranes (PC/Chol (8:1 w/w)). Panels C and F show spectra in LUVs mimicking cancer cell membranes (PC/SM/PE/PS/Chol (4.35:4.35:1:0.3:1 w/w)). Symbols used are as follows: ● for V13K; ▲ for K14D; ▼ for S11D/K14D; ◆ for K14D/T15D; ★ for S11D/T14D/T15D; Δ for A12D; ▽ for F9D/A12D; ◇ for A12D/V16D; and ☆ for F9D/A12D/V16D.



**Figure S3.** Stern–Volmer plots of peptides with three LUV models at 25 °C. Stern–Volmer plots were obtained by the sequential addition of the fluorescence quencher KI. Panels A and D show spectra in LUVs mimicking eukaryotic cell membranes (PC/PG (7:3 w/w)); Panels B and E show spectra in LUVs mimicking normal cell membranes (PC/Chol (8:1 w/w)); Panels C and F show spectra in LUVs mimicking cancer cell membranes (PC/SM/PE/PS/Chol (4.35:4.35:1:0.3:1 w/w)). Symbols used are as follows: ● for V13K; ▲ for K14D; ▼ for S11D/K14D; ◆ for K14D/T15D; ★ for S11D/T14D/T15D; Δ for A12D; ▽ for F9D/A12D; ◇ for A12D/V16D; and ☆ for F9D/A12D/V16D.