

Supplementary information

Pulling Peptides across Nano-Channels: Resolving Peptide Binding and Translocation through The Hetero-Oligomeric Channel from *Nocardia farcinica*

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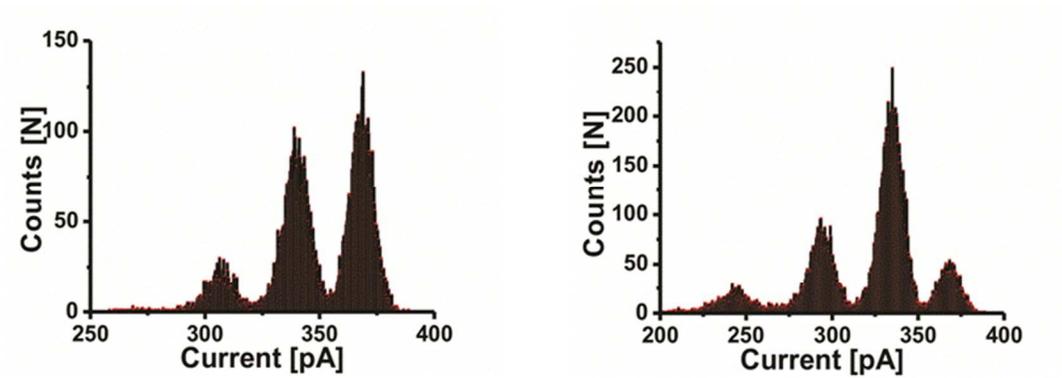
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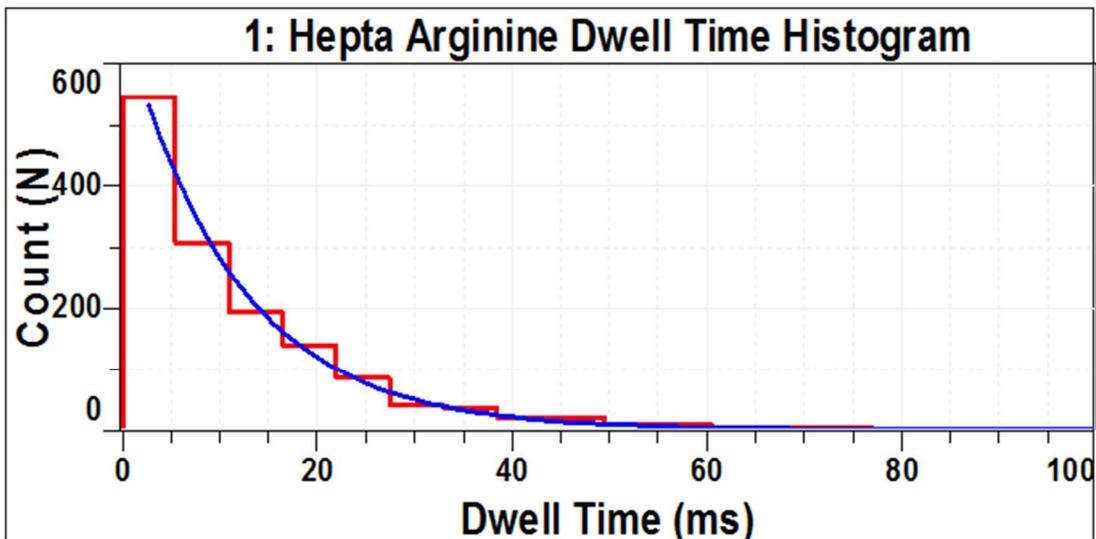
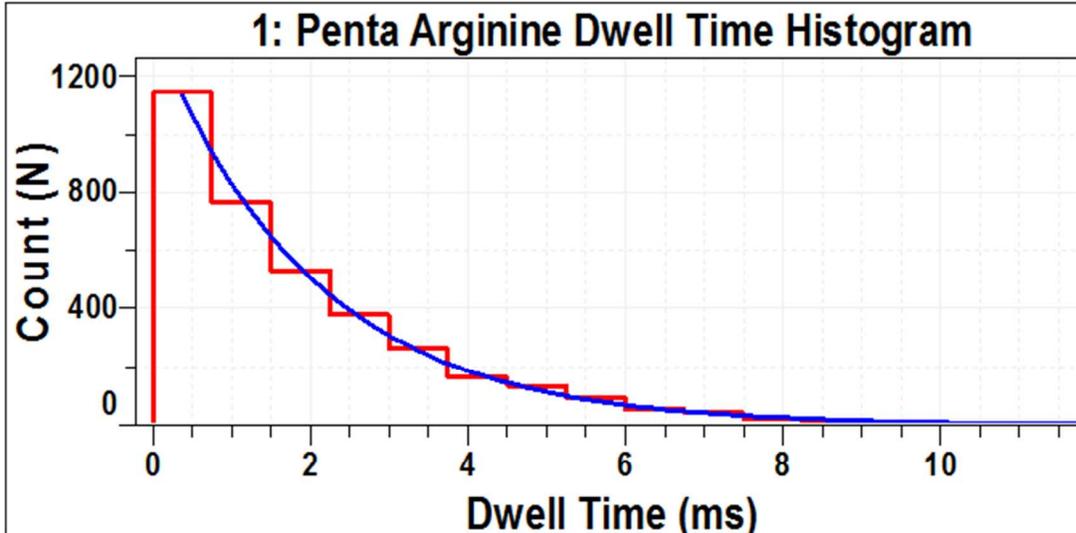
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Supplementary Figure

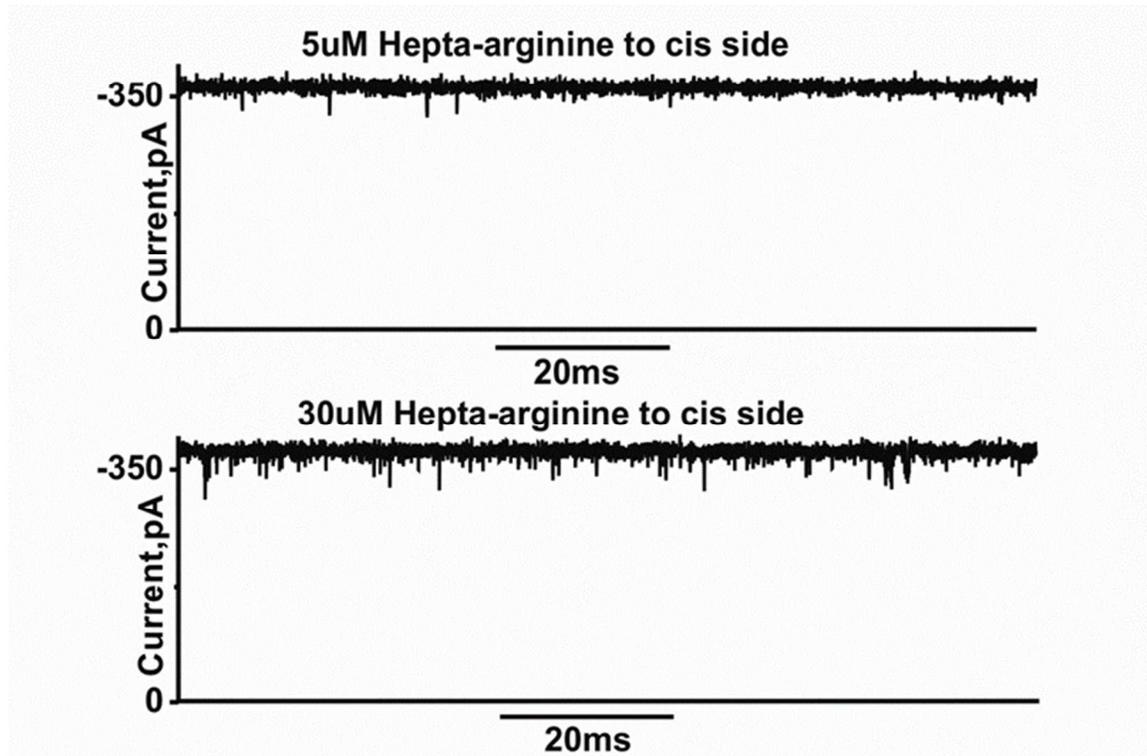
- 1) Current amplitude histogram showing fluctuation of the channel between different conductance steps in the presence of penta-arginine and hepta-arginine. Experimental conditions are 1 M KCl, 10 mM HEPES, pH 7.4.



- 2) Dwell time histogram for closed time and open time in the presence of the penta-arginine and hepta-arginine. Experimental conditions are 150 mM KCl, 10 mM HEPES, pH 7.4. Peptide is added to the cis side of the channel.



- 3) Concentration dependence of peptide interaction with the channel. Increase in concentration of hepta-arginine added to the cis side shows increase in ion current fluctuation. Experimental conditions are 1 M KCl, 10 mM HEPES, pH 7.4.



- 4) Hepta-arginine added to trans side of the chamber at low salt concentration. The interaction effect is so high that the channel does not open at positive voltages, due to the blockage of ion passage by the interaction peptide. Experimental conditions are 150 mM KCl, 100nM Hepta-arginine, 10 mM HEPES, pH 7.4.

