Supplementary Material

Meningococcal DNA binds to human beta-defensin 2 and blocks its lethal effect against the bacteria

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Figure S1



Fig. S1. Survival of bacteria, grown to log phase or stationary phase, incubated with 5 μ M hBD2 for 2 h. Viable counts were determined by plating. Survival is expressed relative to the untreated control. Data are represented as the mean survival, with error bars representing the standard deviation. Significance was tested against the untreated control. The assay was performed in triplicate three times. **P*<0.05; ns, nonsignificant.

Figure S2

■ 30 min ■ 120 min

□ 180 min



Fig. S2. LL-37 triggers membrane permeability similar to lactic acid in NPN assays.

Outer-membrane permeabilization was assessed by NPN fluorescence. Logphase bacteria were incubated with NPN (10 μ M) and lethal concentrations of LL-37 for 3 h, *i. e.* 10 μ M. LL-37 has been shown to kill *N. meningitidis* at concentrations above 5 μ M (Jones et al., 2005) Lactic acid was used as a positive control. Background fluorescence (NPN in the absence of bacteria or hBD2) was subtracted. Values are expressed relative to the untreated control. The assay was performed in duplicate at least three times. Data are represented as the mean values, with error bars representing the standard deviation. Significance was tested against the untreated control. **P*<0.05.

Figure S3



Fig. S3. Flow cytometry analysis of *N. meningitidis* $\Delta pilE$ in the presence of hBD2. Log-phase bacteria were incubated with 1 μ M hBD2 or cephalexin (10 μ g/ml) for 2 h. Bacteria were washed in PBS, fixed, permeabilized, and resuspended in sodium citrate buffer. DNA was stained with SYTOX Green, and DNA content was analyzed by flow cytometry. The assay was performed in single samples three times.





Fig. S4. hBD2-binding and aggregation of wild-type and $\Delta pilT$ bacteria. Survival of log-phase bacteria of wild-type (WT) and $\Delta pilT$ incubated with 1 μ M hBD2 for 3 h. Viable counts were determined by plating. Values are expressed as the mean survival relative to the untreated control. The assay was performed in triplicate at least three times.