Required Materials:

1. 96-well transparent Microtiter plates (Sarstedt 96 Flat Transparent Cat. No.: 83.3924)
2. Yeast mannan (Mannan from Saccharomyces, SIGMA-ALDRICH, CAS-No.: 903688-8) in carbonate buffer (c= 1.2 mg/mL)
3. BSA: 5% Bovine serum albumin (Affiliate of Merck KGaA) in DPBS buffer
4. Phosphate buffer solution (DPBS, w/o Calcium, w/o Magnesium) (pH= 7.2) (PAN-Biotech, Cat.No.: P04-36500)
5. PBST buffer solution: PBS buffer + Tween®20 (0.05%) (Carl Roth GmbH)
6. Lysogen broth (LB) medium (Carl Roth GmbH)
7. *E.coli* strain ORN178
8. Inhibitors: Chitosan, Chitosan-Boronic and Chitosan-Boroxol were synthesized by Tomás García Cambón

Additional Material for Adhesion-Inhibition Assay with HT29 cells

1. 96-well flat plate transparent (Sarstedt 96 Flat Transparent Cat. No.: 83.3924)
2. Dulbecco's modified Eagle's medium (DMEM) (Carl Roth GmbH Art.-Nr. 9007.1) + 10% fetal bovine serum (FBS) + 1% penicillin- streptomycin (PS)

Procedure:

All Adhesion-Inhibition assays were performed under sterile conditions.

1. Coating of 96-well plates with yeast mannan

Yeast mannan in carbonate buffer (c= 1.2 mg/mL) (100 µL/well) was applied to the 96-well transparent Microtiter plates. The plate without lid was dried in the oven at 37°C overnight. The plate was washed with PBST (100 µL/well) and with DPBS (100 µL/well). BSA (100 µL/well) was added to the plate followed by shaking in the Thermoshaker at 37°C and 110 rpm. After incubation the plate was washed with PBST (100 µL/well) and DPBS (100 µL/well).

Coating of 96-well plates with HT-29 cells

HT-29 cells in DMEM (c= 1.2 x 10^6 cells/mL) (100 μL/well) were applied to the transparent 96-well plate. The plate with lid was kept in the incubator at 37°C overnight. Afterwards the plate was washed with DPBS (100 µL/well) two times.

2. Bacterial Preparation

The *E.coli* strain ORN178 was cultured overnight in a tube with LB medium (5.00 mL) in the Thermoshaker at 37°C and 250 rpm. After incubation overnight the bacteria solution was transferred to a falcon tube and then centrifuged at room temperature for 8 min at 4500 rcf. The bacteria strain was washed with DPBS (4.00 mL) and the bacteria solution was adjusted to anOD_{600}= 0.3-0.4.

3. Adhesion-Inhibition Assay

Dilution rows of the respective inhibitor were prepared. The inhibitor solutions were added to the plate (50.0 µL/well) as well as the bacteria solution (50.0 µL/well). One row vertical and horizontal was left free. The plate was incubated for 45 minutes and then washed with DPBS buffer twice (100 µL/well). Afterwards LB medium (100 µL/well) was added and the plate was kept in the reader for the overnight OD measurement. The overnight OD measurement was taking place at 37°C with shaking for 2 sec. at 5 Hz before every measurement. The measurements were taken every 15 minutes with a total Cycle run time of 4 h.