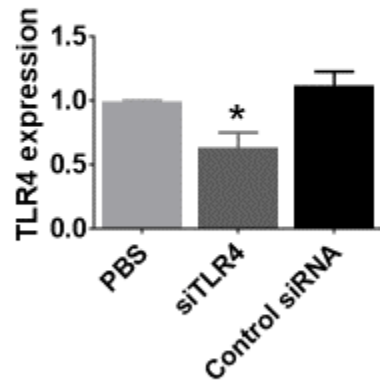


Supplementary Figure 1

**Supplementary Figure 1.** Intracolonic administration of LPS-RS (1 mg/kg) failed to block visceral hypersensitivity induced by the PAR2 agonist SLIGKV-NH2 (0.5 mg/kg; Tocris, Bristol, UK). \*Significantly different from PBS-treated rat ( $P < 0.05$ ).



Supplementary Figure 2

**Supplementary Figure 2.** RT-PCR analysis shows that TLR4 gene expression in rat colon mucosa was significantly inhibited by treatment of siRNA targeting TLR4. \*Significantly different to PBS treated ( $P < 0.05$ ).

### Supplementary Table 1

High-FODMAP diet–induced colonic mucosal inflammation prevented by rifaximin

<b>Cells/mm<sup>2</sup></b>	<b>RC</b>	<b>HFM</b>	<b>HFM+Rif</b>
Mononuclear cells	24.5±3.5	34.4±2.6*	15.2±4.6#
Neutrophils	40.9±4.6	60.5±6.8*	38.5±4.7#
Eosinophils	11.7±3.9	27.4±4.6*	16.3±3.0
Mast cells	5.8±2.1	14.3±3.1*	4.5±2.0#

n=6 in each group, \*, significantly different than RC (p<0.05); #, significantly different than HFM (p<0.05). RC, regular chow; HFM, high-FODMAP diet; Rif, rifaximin

### Supplementary Table 2

Low-FODMAP diet prevented restraint stress–induced inflammatory cell infiltration in the colonic mucosa

<b>Cells/mm<sup>2</sup></b>	<b>Sham RS</b>	<b>RS</b>	<b>RS+LFM</b>
Mononuclear cells	24.0±2.6	31.7±2.1*	19.38±2.5#
Neutrophils	48.5±3.9	88.7±7.6*	50.1±3.0#
Eosinophils	13.5±2.1	21.0±2.4*	15.1±2.4
Mast cells	11.0±3.3	34.5±5.7*	18.0±5.2#

n=6 in each group, \*, significantly different than sham RS as control (p<0.05); #, significantly different than RS (p<0.05). RS, restraint stress; LFM, low-FODMAP diet

### Supplementary Table 3

Low-FODMAP diet prevented water avoidance stress–induced inflammatory cell infiltration in the colonic mucosa

<b>Cells/mm<sup>2</sup></b>	<b>Sham WAS</b>	<b>WAS</b>	<b>LFM+WAS</b>
Mononuclear cells	18.7±3.4	37.4±6.4*	18.7±3.9#
Neutrophils	43.2±6.1	99.2±10.4*	56.0±4.0#
Eosinophils	12.8±2.2	21.0±4.8	9.4±3.0
Mast cells	9.0±3.7	25.7±5.6*	7.0±1.8#

n=6 in each group, \*, significantly different than sham WAS (p<0.05); #, significantly different than WAS (p<0.05). WAS, water avoidance stress; LFM, low-FODMAP diet