

Supplementary Information

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Table S1. Primer sequences used for RT-qPCR in Caco-2 cells.

Genes	Sequence (5'-3')
β -actin	F: CCTTCCCTCCTCAGATCATTGC R: ATACTCCTGCTTGCTGATCCAC
Claudin-1	F: GATGAGGATGGCTGTCATTG R: CCTGACCAAATTCGTACCTG
Occludin	F: CACGCTTGCCTGGGACAGAG R: TCTGTATAGCCTCCGTAGCC
ZO-1	F: CACGCTTGCCTGGGACAGAG R: TCTGTATAGCCTCCGTAGCC

Table S2. Animal model experimental design.

Group	Daily Gavage Treatment (0.2mL)	1-7 Days	8-14 Days
Control	Saline (0.9%)	sterilized water	sterilized water
Model	Saline (0.9%)	sterilized water	DSS water (2.5%)
<i>S. boulardii</i> CNCMI-745	1×10 ⁸ CFU/mL <i>S. boulardii</i> CNCMI-745	sterilized water	DSS water (2.5%)
<i>K. marxianus</i> QHBYC4L2	1×10 ⁸ CFU/mL <i>K. marxianus</i> QHBYC4L2	sterilized water	DSS water (2.5%)
<i>S. cerevisiae</i> QHNLD8L1	1×10 ⁸ CFU/mL <i>S. cerevisiae</i> QHNLD8L1	sterilized water	DSS water (2.5%)
<i>D. hansenii</i> QSCLS6L3	1×10 ⁸ CFU/mL <i>D. Hansenii</i> QSCLS6L3	sterilized water	DSS water (2.5%)

Table S3. Scoring system for disease activity index (DAI).

Score	Weight Loss (%)	Stool Consistency	Blood in Feces
0	None	Normal	Negative (no bleeding)
1	1.0~5.0	Loose stools	Negative
2	5.0~10.0	Loose stools	Hemoccult positive (slight)
3	10.0~15.0	Diarrhea (slight)	Hemoccult positive
4	Over 15.0	Diarrhea(Watery diarrhea)	Gross bleeding

Table S4. Primer sequences used for RT-qPCR in colitis mice

Genes	Sequence (5'-3')
β -actin	F: CCTTCCCTCCTCAGATCATTGC
	R: ATACTCCTGCTTGCTGATCCAC
Claudin-1	F: TGGATGGCTGTCATTGGGG
	R: ACCTGGCATTGATGGGGGT
Occludin	F: ATAATGGGAGTGAACCCGACG
	R: CCACGATAATCATGAACCCCA
ZO-1	F: GGGAGGGTCAAATGAAGACA
	R: GGCATTCTGCTGGTTACAT

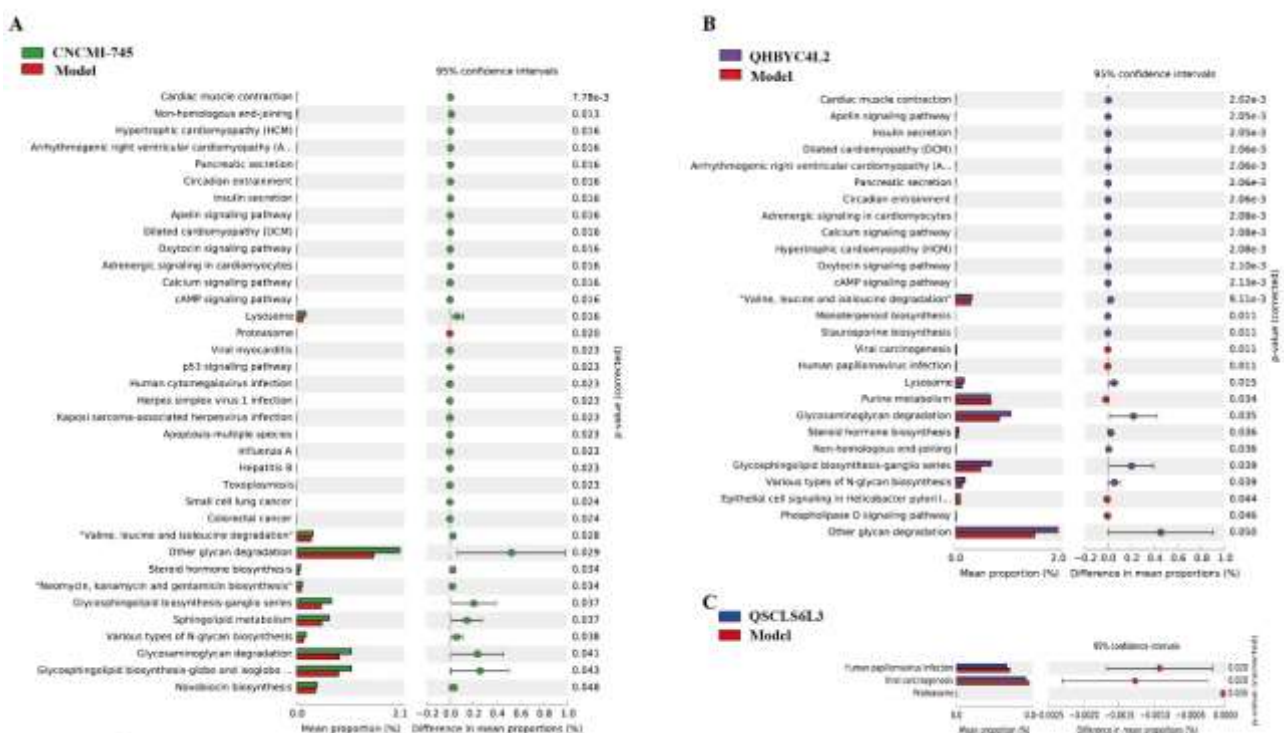


Figure S1. Effects of *S. boulardii* CNCMI-745, *K. marxianus* QHBYC4L2 and *D. hansenii* QSCLS6L3 on gut microbial functions. **(A)** Differences in predicted functions between *S. boulardii* CNCMI-745 and DSS groups. **(B)** Differences in predicted functions between *K. marxianus* QHBYC4L2 and DSS groups. **(C)** Differences in predicted functions between *D. hansenii* QSCLS6L3 and DSS groups.