Additional file 4: Fig. S10 Inflammatory strains IB44a IB6a HD59a IB51a ATCC19434 ++ + ++ + **BSH** Probiotic strains IB18a HD26a HD50a NCIMB11181 SF68 **BSH** C В 2.0 2.0-1.5 1.5 Relative ROS level Relative ROS level 1.0 1.0

Inflammatory Probiotic Bile salt hydrolase (BSH) activity and reactive oxygen species (ROS)-generating ability in E. faecium strains. (a) BSH activity of 10 E. faecium strains was evaluated in culture with glyco-conjugated deoxycholic acid (GDCA)-containing agar. If white zonal change of DCA appeared around colonies, BSH activity was considered positive. ++, the thickness of zone  $\geq$  1.0 mm; +, 0 < the thickness < 1.0 mm; -, no zonal change. (b and c) Supernatant of culture with E. faecium strains was

0.5

0.0

Inflammatory

Probiotic

CONTINUE BY TO BE

0.5

evaluated for presence of ROS. Relative ROS level in individual strains (b) and average ROS level in the inflammatory or the probiotic cluster (c) are shown. Mean  $\pm$  SE in (c). \*, P < 0.05.

## Additional file 4: Fig. S11

Presence of E. faecium in feces of UC

patients on treatment is not associated with disease activity. Total Mayo score of 16 UC patients is shown according to

the presence of *E. faecium* in feces determined by quantitative PCR. NS, not significantly different.