

Table S1. Effects of rumen fluid inoculation on scour days of lambs

Experimental days	Counts			P-value**	
	Normal Days	Scour Days	Total	C vs IBW	C vs IDW
Day 8-21 (n=5)					
Control	62	8	70	1.00	0.37
IBW	62	8	70		
IDW*	56	14	70		
Day 22-28 (n=5)					
Control	33	2	35	0.56	0.56
IBW	34	1	35		
IDW	34	1	35		

*: IDW group had not receive any inoculation during this time

**: Significance is the pairwise comparison of Pearson's Chi-Square test between the three treatments

Table S2. P-value matrix of pairwise Adonis analysis of inoculation aliquots

Fraction-Inoculation	Bray Curtis distance		
	I8&I9*	I15&I16	I22&I23
I15&I16	0.330	-	-
I22&I23	0.330	0.330	-

*Two inoculating day as one group

Table S3. P-value matrix of pairwise Adonis analysis of the rumen and the colon microbiota

Fraction- Inoculation	Bray Curtis distance						
	Inoculum	RC-C*	RC-BT	RC-AT	CC-C**	CC-BT	CC-AT
RC-C	0.017	-	-	-	-	-	-
RC-BT	0.017	0.192	-	-	-	-	-
RC-AT	0.017	0.715	0.247	-	-	-	-
CC-C	0.017	0.028	0.018	0.017	-	-	-
CC-BT	0.017	0.019	0.018	0.017	0.726	-	-
CC-AT	0.017	0.017	0.017	0.017	0.923	0.488	-

*: RC- means rumen content from different inoculation groups

**.: CC- means colon content from different inoculation groups

Table S4. Ruminal and colonic genera with significant relative abundance between IBW* and control lambs

Fraction	Taxa	Control	IBW	SEM	P-value
Rumen Content	<i>g_Prevotellaceae</i> UCG-001	0.439	1.081	0.126	0.014
	<i>g_Coproccoccus</i> 1	0.012	0.055	0.013	0.014
	<i>g_Lachnoclostridium</i> 1	0.299	0.975	0.157	0.014
	<i>g_Moryella</i>	0.102	0.422	0.099	0.014
	<i>g_Tyzzereella</i> 4	0.034	0.134	0.019	0.014
	<i>g_Eubacterium hallii</i> group	0.318	0.491	0.162	0.014
	<i>g_Succiniclasticum</i>	0.051	1.108	0.313	0.014
Colon	<i>g_Veillonella</i>	0.001	0.174	0.081	0.014
Content	<i>g_Escherichia Shigella</i>	2.737	8.444	1.565	0.014

*: Inoculation before weaning, n=5

Table S5. Ruminal and colonic genera with significant relative abundance between IDW* and control lambs

Fraction	Taxa	Control	IDW	SEM	P-value
Rumen	<i>g_Bacteroidales</i> S24-7 group bacterium	0.010	0.105	0.036	0.014
	<i>g_Eubacterium</i> coprostanoligenes group	0.098	0.200	0.03	0.014
Content	<i>g_Erysipelatoclostridium</i>	0.006	0.013	0.003	0.046
	<i>g_Sharpea</i>	8.592	18.53	4.322	0.014
Colon	<i>g_Senegalimassilia</i>	0.029	0.013	0.007	0.046
	<i>g_Copro bacter</i>	0.226	1.202	0.329	0.025
	<i>g_Anaerofilum</i>	0.039	0.061	0.018	0.025
Content	<i>g_Ruminococcus</i> 1	0.015	0.034	0.010	0.046
	<i>g_Mitsuokella</i>	0.030	0.014	0.006	0.046
	<i>g_Veillonella</i>	0.001	0.022	0.004	0.025

*: Inoculation during weaning, n=5