

Supplementary Materials

Table S1. Chemical composition (g/kg DM or as stated) of the ruminant diet fed to two fistulated Holstein cow.

Item [†]	Corn silage	Concentrate mix
DM (g/kg as fed)	921	878
OM	922	941
CP	121	171
EE	25	35
Ash	78	59
NFE	472	645
CF	304	90
Total carbohydrates	776	735
Ca	0.04	0.11
P	0.04	0.05

[†]DM, dry matter; OM, organic matter; CP, crude protein; EE, ether extract; NFE, nitrogen-free extract; CF, crude fiber.

Table S2. Primers used in this study

Gene	Primer sequence (5' to 3')	Annealing temperature (°C)	Amplicon size (bp)	Reference
<i>Bacterial identification</i>				
<i>16S rRNA</i> (for amplification)	F(27F): AGAGTTTGATCMTGGCTCAG R(1492R): TACGGYTACCTTGTTACGACTT	55 °C	1500	Universal primer
<i>16S rRNA</i> (for sequencing)	F(785F): GGATTAGATACCCTGGTA R(907R): CCGTCAATTCMTTTRAGTTT	-	-	Universal primer
<i>sodA</i>	F(d1): CCITAYICITAYGAYGCIYTIGARCC R(d2): ARRTARTAIGCRTGYTCCCAIACRTC	37 °C	480	[1]
<i>Antimicrobial-resistance genes</i>				
<i>Tetracyclines</i>				
<i>tet(M)</i>	F(tetM-F): GAATCTGAACAATGGGAT R(tetM-R): CTAACAATTCTGTTCCAGC	55 °C	1,099	[2]
<i>tet(O)</i>	F(tetO_F): AGACGGAGCAGTATTAG R(tetO_R): CTGCCCCAACCTTTTGCTTCAC	55 °C	200	[2]
<i>tet(Q)</i>	F(tetQ_F): GACTCTATGGATATAGAG R(tetQ_R): CCATATCCTCTACAATCG	55 °C	835	[2]
<i>tet(S)</i>	F(tetS_F): CATAGACAAGCCGTTGACC R(tetS_R): ATGTTTTTGGAACGCCAGAG	55 °C	667	[2]
<i>Lincosamides</i>				
<i>lnu(C)</i>	F(lnuC-F): AATTTGCAATAGATGCGGAGA R(lnuC-R): TCATGTGCATTTTCATCA	55 °C	400	[3]
<i>Macrolides</i>				
<i>erm(A)</i>	F(ermA-F): ACGATATTCACGGTTTACCCACTTA R(ermA-R): AACCAGAAAAACCCTAAAGACACG	53 °C	610	[4, 5]
<i>erm(C)</i>	F(ermC-F): TCAAAACATAATATAGATAAA	50 °C	641	[4, 5]

	R(ermC-R): GCTAATATTGTTTAAATCGTCAAT			
<i>erm(B)</i>	F(erm(B)F): GGTAAGGGGCATTTAACGAC	55 °C	454	[6]
	R(erm(B)R): CGATATTCTCGATTGACCCA			
<i>mef(A)</i>	F(mef(A)F): AGTATCATTAATCACTAGTGC	55 °C	328	[6]
	R(mef(A)R): TTCTTCTGGTACTAAAAGTGG			
<i>Detection of the Tn916-like transposase</i>				
<i>Tn916-like</i>	F(Tn916L-F): GCCATGACCTATCTTATA	51 °C	476	[7]
<i>transposase</i>	R(Tn916L-R): CTAGATTGCGTCCAA			
<i>L(+)-lactate dehydrogenase gene</i>				
<i>ldh gene</i>	F(ldh-F): CTTGACTCAGCTCGTTTCCG	55 °C	224	this study
	R(ldh-R): GAGTAAGCAGCGTCACGAAC			

References

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Table S3. Biochemical characterization of SBSEC used in this study

Strains	Substrate																					
	VP	HIP	ESC	PYRA	α GAL	β GUR	β GAL	PAL	LAP	ADH	RIB	ARA	MAN	SOR	LAC	TRE	INU	RAF	AMD	GLYG	β HEM	
<i>Streptococcus equinus</i>																						
CNU_5	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_77-2	+	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	+	+	+	+	-	
CNU_77-3	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	+	+	+	+	-	
CNU_11	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	
CNU_77-16	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_77-20	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	
CNU_77-23	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	
CNU_77-27	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	
CNU_GF	+	-	+	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_G1	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_G2	+	-	+	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_G3	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_G4	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_G5	+	-	-	-	-	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	
CNU_G6	+	-	+	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_9	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_77-8	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	
CNU_77-11	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_77-12	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	
CNU_77-14	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-	
CNU_77-29	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-	
CNU_15	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_20	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_21	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_77-35	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	
CNU_77-37	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-	

CNU_77-40	+	-	+	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-
CNU_25	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_27	+	-	-	-	-	-	+	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_77-43	+	-	+	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-
CNU_77-47	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_77-50	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_29	+	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-
CNU_30	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-
CNU_32	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_77-51	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_77-55	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-
CNU_77-56	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_77-57	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-
CNU_77-60	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_77-68	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_41	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-
CNU_42	-	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-
CNU_77-72	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	+	+	+	+	-
CNU_77-77	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_77-78	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-
<i>Streptococcus lutetiensis</i>																					
CNU_33	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-
CNU_77-61	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-
CNU_77-62	+	-	-	-	-	-	+	-	+	-	-	-	-	-	+	+	-	+	+	+	-
CNU_77-64	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	+	+	+	-
CNU_77-76	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	+	-	+	+	+	-

VP, Voges-Proskauer; HIP, hippuric acid; ESC, esculin; PYRA, pyrrolidonyl arylamidase; α GAL; α -galactosidase; β GUR, β -glucuronidase; β GAL, β -galactosidase; PAL, alkaline phosphatase; LAP, leucine aminopeptidase; ADH, arginine dihydrolase; RIB, ribose; ARA, arabinose; MAN, mannitol; SOR, sorbitol; LAC, lactose; TRE, trehalose; INU, inulin; RAF, raffinose; AMD, amidon; GLYG, glycogen; β HEM, β -hemolysis.