

1 **Table S4. Summary of glycoside hydrolases encoded within scaffolds reconstructed from sequenced fosmids selected from functional**
 2 **genomic screens.**

Scaffold	GH2	GH3	GH5	GH6	GH8	GH9	GH10	GH16	GH26	GH27	GH43	GH94	<i>susD</i>	<i>tonB</i>	Phylo. Binning	C	X
Sc7						1									Bacteria	+	-
Sc30			1									1 ^{CBM_X}		1	Bacteria	+	-
Sc36			1												δ-Proteobacteria	+	-
Sc41				1											Clostridia	+	-
Sc52			1												Lachnospiraceae	+	-
Sc65			1					1 ^{CBM4}							Lachnospiraceae	+	-
Sc75			1												Lachnospiraceae	+	-
Sc47			1						2	1					Bacteroidales	+	-
Sc106			1									1 ^{CBM_X}			Bacteroidales	+	-
Sc77						1									Bacteroidales	+	-
Sc58			1						1				1	1	Bacteroidales	+	-
Sc17			1						1	2		1 ^{CBM_X}	1	1	Bacteroidales	+	-
Sc100	1		2						1			1 ^{CBM_X}	1	1	Bacteroidales	+	-
Sc104			1						1	1		1 ^{CBM_X}	1	1	Bacteroidales	+	+
Sc78	1		2						1	1		1 ^{CBM_X}	1	1	Bacteroidales	+	+
Sc57							1					1	1	1	Bacteroidales	-	+
Sc8							1 ^{CBM6}					1 ^{CBM6}			Bacteroidales	-	+
Sc73							1					1			Bacteroidales	-	+

3 C Cellulose degrading activity detected using carboxymethyl cellulose as a substrate. X Xylan degrading activity detected using birchwood xylan as a substrate.

4 Carbohydrate binding modules (CBMs) are indicated in superscript text.

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