

Table S1: Muropeptides identified through high-performance liquid chromatography analysis

Muropeptide ¹ or feature	Relative peak area (%) ²			Retention time (min)
	WT	$\Delta ttsA$	$\Delta ycbB$	
Tri	11.9	11.6	6.6	20.8
Tetra	32.9	32.9	44.4	32.6
Di	2.5	2.5	2.1	37.0
TriTri(DAP)	2.4	2.4	0.4	56.9
TetraTri(DAP)	6.0	6.1	1.0	62.0
TetraTri	7.7	7.1	2.8	63.6
TetraTetra	32.9	33.6	38.6	69.6
TetraTetraTetra	3.6	3.7	4.1	85.1
% dipeptides	2.5	2.5	2.1	
% tripeptides	21.2	20.6	8.9	
% tetrapeptides	76.3	76.9	89.0	
% DD-cross-links ³	85.0	85.0	97.3	
% LD-cross-links ³	15.0	15.0	2.7	

¹ Muropeptides were identified by their retention time

² Values were calculated from known muropeptides.

³ Calculated from cross-linked muropeptides only.