SUPPLEMENTARY DATA

Supplementary table 1 : Primers used in this study

Name	Sequence (5'-3')
P*mucR*F	CCGGAAATGTCCGATGCGAGTTGTTTTCCATG
P*mucR*R	GAAGATCTTCGGAATTCCGCAGCGGCTGACAATGGC
T*mucR*F	GGAATTCCGAAGATCTTCCTTCAGCGCGTGAATCAC
T*mucR*R	CAAACGGGAATCACATGATGCAGGCCACACTG
mucR upstream	CGCATTTTCAGCTGTGAC
mucR dowstream	CCGTGTATGAATGACATC
mucR XhoI F	CTCGAGGATGGAAAATCTGGAAACG
mucR ClaI R	ATCGATTCAGGCGTCCTTCGGCTT
XhoI*pmucR*R	CTCGAGCCTCCTTTTTTAATTTTTTGTTGTCC
BamHI*pmucR*F	GGATCCAGGAAGAGGGCGTAGGAA

Supplementary Table 2 : Primers used for qRT-PCR.

ORF	**Forward** (5'-3')	**Reverse** (5'-3')
fliC (BMEII0150)	CTTCGTACAATCGTTCCGGT	CCATGGTCTTCGCATCAGT
flgE (BMEII0159)	TTCCGTGAACGCTGC	GAAACGAGATCGCCCGT
ftcR (BMEII0158)	GCCGCATTCTGGAATATCTGAT	AATGCCGTAAATCGCACTAAAAA
fliF (BMEII0151-0152)	CCTACGAGACGCTCTATGTCG	AAGGGAATGCCAGCTTCAC
mucR(BMEI1364)	ATGACGACTATATTGTCTGCCTTG	TCATGTTGTAATGGGTCACCAG
cgs (BMEI1837)	GCCGATCAGAAACAGGCG	TTCCCACTGGTGCCTTGC
cgt (BMEI0984)	CAATGTTTCGGTGGTGCAGA	TTTCGAGGTTCTTGGCGTAATC

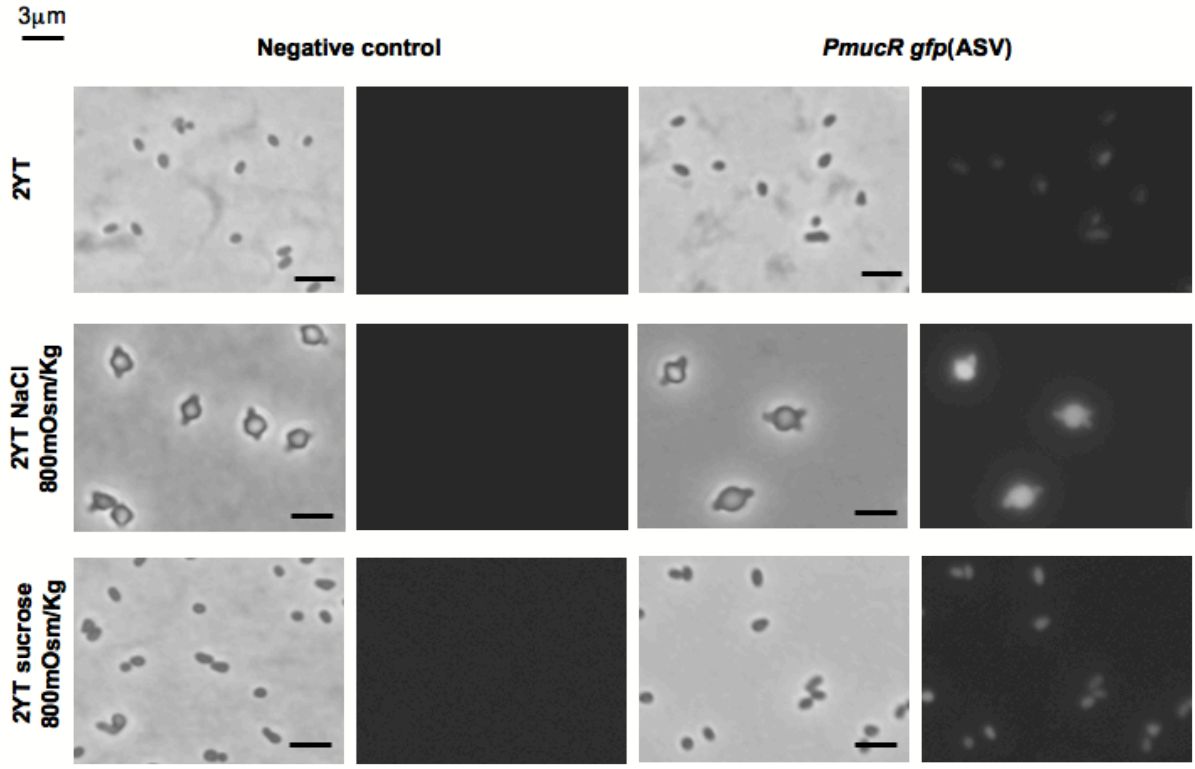

Figure S1. Induction of the P*mucR* activity in response to osmotic and saline stress.
Representative pictures of *B. melitensis* WT expressing the transcriptional fusion P*mucR-gfp*(ASV)observed in phase contrast and fluorescence microscopy. The *B. melitensis* WT bearing the pBBR-*gfp*(ASV) plasmid was used as negative control. Reporter and control strains were cultivated for 24h in 2YT, 2YT supplemented with 314.5mM NaCl or 2YT supplemented with 628.9 mM sucrose. The concentration of sucrose added in the medium was calculated to reach the same osmolality (800mOsm/Kg taking into account only NaCl and sucrose). Cells were observed on agarose pad in phase contrast and epifluorescence microscopy. For a equivalent osmolality, the NaCl-supplemented medium promotes cell shape alteration and a strong induction of P*mucR* activity which is much lower in unchanged cells grown in the sucrose-supplemented one. Scale bars, 3 µm.

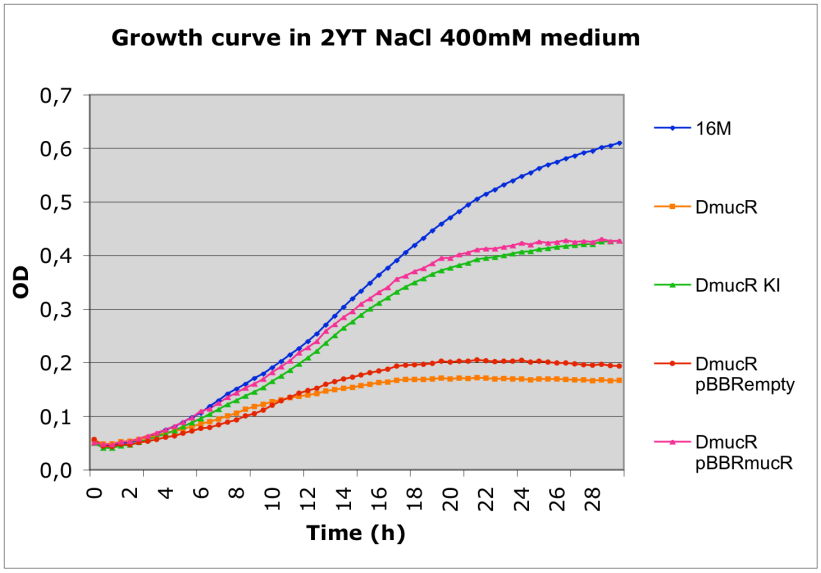

Figure S2. Growth curve of *B. melitensis* strains in 2YT rich medium. Cultures were inoculated from a preculture to an initial OD_{600} of 0.05 in a Bioscreen plate. Bacteria were grown for 28 h with continuous shaking in 2YT medium containing 400mM NaCl. The optical density was measured every 30 minutes. The graph represents the average OD of technical triplicates for each condition from one of two representative experiments.

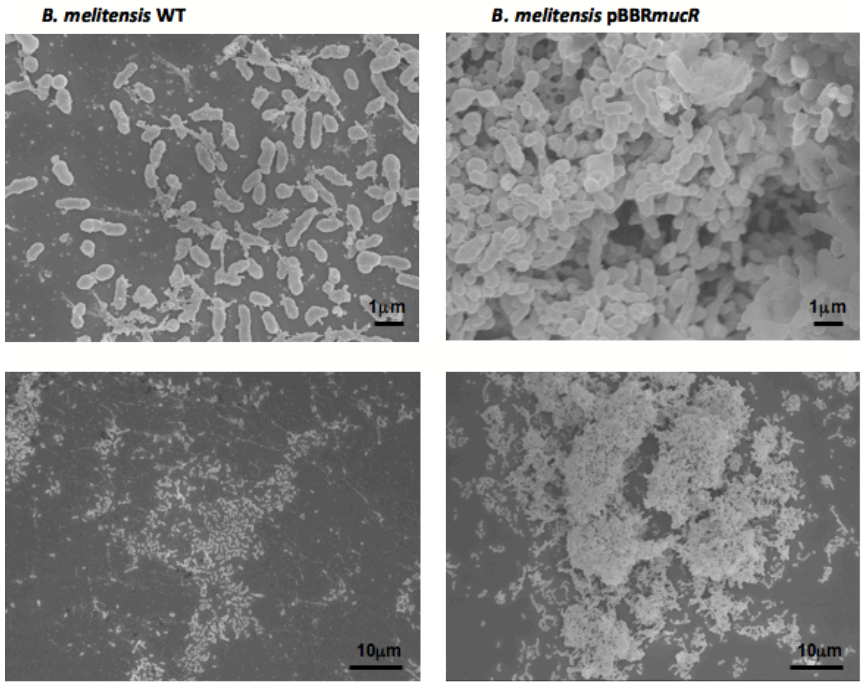

Figure S3 : Scanning electron micrographs of *B. melitensis* WT and *B. melitensis* pBBR*mucR* after 72h of culture in 2YT liquid medium. One ml of bacterial suspension was centrifuged on poly-L-lysine-coated coverslip and fixed with PFA 2% in PBS buffer. Pictures reprensent free or clumping bacteria at 8500X magnification (upper, scale bars : 1 µm) and 1500X magnification (below, scale bars : 10 µm).