

**Supplemental Table S1.** Summary of Results Using the U-tube Assay.

Matrix	Matrix Volume (μl)	Cells	[Cell] (x10 <sup>7</sup> /ml)	Inocula: CA or control	[CA]	Incubation Environment	Incubation Time (Hours)	Final Cell Count
0.1% agarose in BSK-II	450	in vitro Bb	2.1	D-GlcNAc	100mM	34°C trigas	96	0
0.1% agarose in BSK-II	450	in vitro Bb	2.1	PBS		34°C trigas	96	0
0.1% agarose in BSK-II	300	in vitro Bb	2.3	D-GlcNAc	100mM	34°C trigas	168	0
0.1% agarose in BSK-II	300	in vitro Bb	2.3	PBS		34°C trigas	168	0
0.1% agarose in BSK-II	300	in vitro Bb	2	D-GlcNAc	500mM	34°C trigas	120	0
0.1% agarose in BSK-II	300	in vitro Bb	2	PBS		34°C trigas	120	0
0.1% agarose in BSK-II	300	in vitro Bb	1.8	tick saliva	1%	34°C trigas	72	0
0.1% agarose in BSK-II	300	in vitro Bb	1.8	PBS		34°C trigas	72	0
0.1% agarose in PBS	300	in vitro Bb	2.8	chitobiose	10mM	34°C trigas	19	0
0.1% agarose in PBS	300	in vitro Bb	2.8	PBS		34°C trigas	19	0
0.1% agarose in PBS	300	in vitro Bb	2.4	chitobiose	10mM	34°C trigas	24	0
0.1% agarose in PBS	300	in vitro Bb	2.4	PBS		34°C trigas	24	0
0.1% agarose in PBS	300	in vitro Bb	2.4	chitobiose	10mM	34°C trigas	24	2/cs
0.1% agarose in PBS	300	in vitro Bb	2.4	PBS		34°C trigas	24	0
0.1% agarose in low sugar BSK-II	300	in vitro Bb	2	chitobiose	10mM	34°C trigas	45	0
0.1% agarose in low sugar BSK-II	300	in vitro Bb	2	low sugar BSK-II		34°C trigas	45	0
0.1% agarose in low sugar BSK-II	300	Host-adapted Bb	3	chitobiose	10mM	34°C trigas	72	0
0.1% agarose in low sugar BSK-II	300	Host-adapted Bb	3	D-GlcNAc	100mM	34°C trigas	72	0

0.1% agarose in low sugar BSK-II	300	Host-adapted Bb	3	low sugar BSK- II		34°C trigas	72	0
0.1% agarose in low sugar BSK-II	300	Host-adapted Bb	3	tick saliva	5%	34°C trigas	72	0
0.1% agarose in low sugar BSK-II	300	Host-adapted Bb	3	chitobiose	10mM	34°C trigas	72	0
0.1% agarose in low sugar BSK-II	300	Host-adapted Bb	3	low sugar BSK- II		34°C trigas	72	0
4% gelatin in low sugar BSK-II	300	Host-adapted Bb	1.8	chitobiose in low sugar BSK- II	10mM	23°C	48	0