

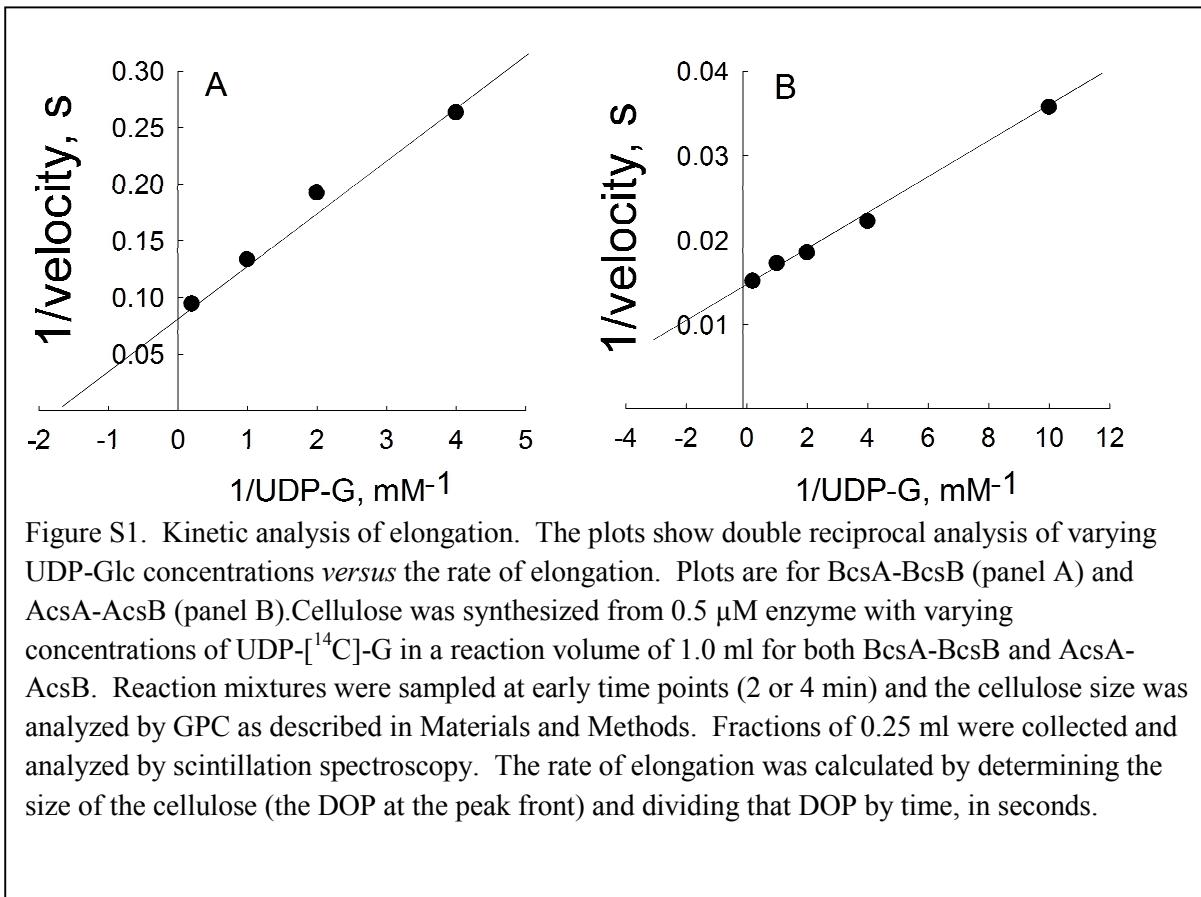
## Initiation, Elongation and Termination of Bacterial Cellulose Synthesis

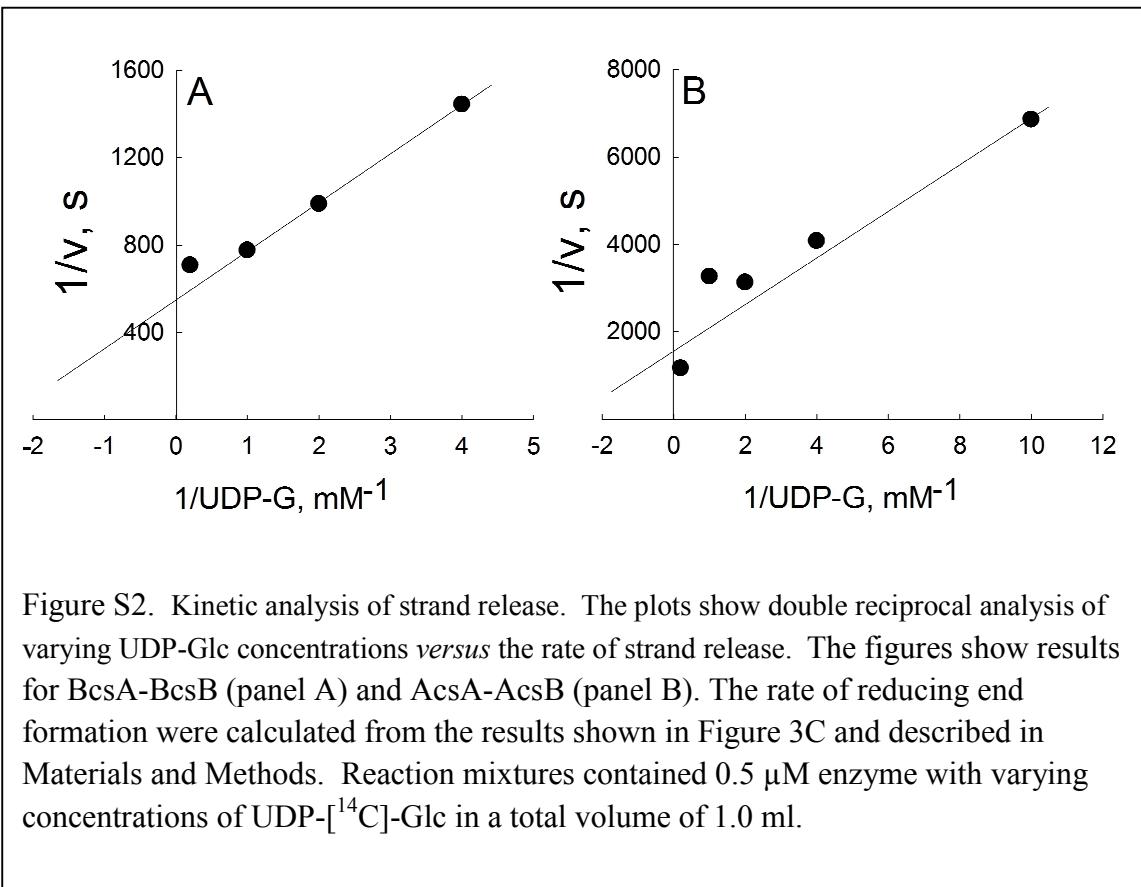
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## Supplemental Material





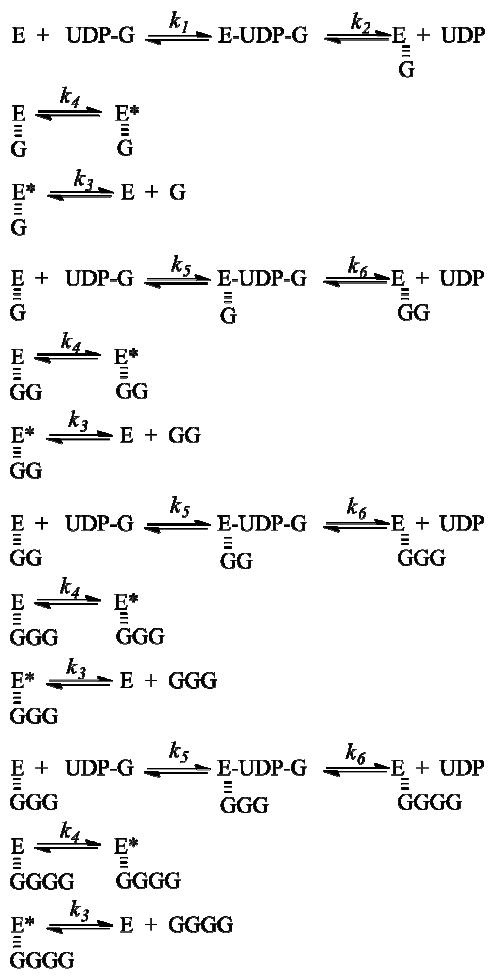


Figure S3. The mechanism used for the Kinsim simulation shown in Figure 4. The asterisk (\*) designation indicates translocation into the cellulose exit channel.

Figure S4. Mechanism used for Tenua input.

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EA0 + UG <-> UGEB0 <-> EB1 + U ;
EB1 <->EA1 ;
EA1 + UG <-> UGEB1 <-> EB2 + U ;
EB2 <->EA2 ;
EA2 + UG <-> UGEB2 <-> EB3 + U ;
EB3 <->EA3 ;
EA3 + UG <-> UGEB3 <-> EB4 + U ;
EB4 <->EA4 ;
EA4 + UG <-> UGEB4 <-> EB5 + U ;
EB5 <->EA5 ;
EA5 + UG <-> UGEB5 <-> EB6 + U ;
EB6 <->EA6 ;
EA6 + UG <-> UGEB6 <-> EB7 + U ;
EB7 <->EA7 ;
EA7 + UG <-> UGEB7 <-> EB8 + U ;
EB8 <->EA8 ;
EA8 + UG <-> UGEB8 <-> EB9 + U ;
EB9 <->EA9 ;
EA9 + UG <-> UGEB9 <-> EB10 + U ;
EB10 <->EA10 ;
EA10 + UG <-> UGEB10 <-> EB11 + U ;
EB11 <->EA11 ;
EA11 + UG <-> UGEB11 <-> EB12 + U ;
EB12 <->EA12 ;
EA12 + UG <-> UGEB12 <-> EB13 + U ;
EB13 <->EA13 ;
EA13 + UG <-> UGEB13 <-> EB14 + U ;
EB14 <->EA14 ;
EA14 + UG <-> UGEB14 <-> EB15 + U ;
EB15 <->EA15 ;
EA15 + UG <-> UGEB15 <-> EB16 + U ;
EB16 <->EA16 ;
EA16 + UG <-> UGEB16 <-> EB17 + U ;
EB17 <->EA17 ;
EA17 + UG <-> UGEB17 <-> EB18 + U ;
EB18 <->EA18 ;
EA18 + UG <-> UGEB18 <-> EB19 + U ;
EB19 <->EA19 ;
EA19 + UG <-> UGEB19 <-> EB20 + U ;
EB20 <->EA20 ;
EA20 + UG <-> UGEB20 <-> EB21 + U ;
EB21 <->EA21 ;
EA21 + UG <-> UGEB21 <-> EB22 + U ;
EB22 <->EA22 ;
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EA23 + UG <-> UGEB23 <-> EB24 + U ;
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EA24 + UG <-> UGEB24 <-> EB25 + U ;
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EA27 + UG <-> UGEB27 <-> EB28 + U ;
EB28 <->EA28 ;
EA28 + UG <-> UGEB28 <-> EB29 + U ;
EB29 <->EA29 ;
EA29 + UG <-> UGEB29 <-> EB30 + U ;
EB30 <->EA30 ;
EA30 + UG <-> UGEB30 <-> EB31 + U ;
EB31 <->EA31 ;

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EA31 + UG <-> UGEB31 <-> EB32 + U ;
EB32 <-> EA32 ;
EA32 + UG <-> UGEB32 <-> EB33 + U ;
EB33 <-> EA33 ;
EA33 + UG <-> UGEB33 <-> EB34 + U ;
EB34 <-> EA34 ;
EA34 + UG <-> UGEB34 <-> EB35 + U ;
EB35 <-> EA35 ;
EA35 + UG <-> UGEB35 <-> EB36 + U ;
EB36 <-> EA36 ;
EA36 + UG <-> UGEB36 <-> EB37 + U ;
EB37 <-> EA37 ;
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EA48 + UG <-> UGEB48 <-> EB49 + U ;
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EA49 + UG <-> UGEB49 <-> EB50 + U ;
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EA50 + UG <-> UGEB50 <-> EB51 + U ;
EB1 <-> EA0 + T1 ;
EB2 <-> EA0 + T2 ;
EB3 <-> EA0 + T3 ;
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EB27 <-> EA0 + T27 ;

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