Figure legends

Fig. S1. SDS-PAGE analyses of recombinant OcSus1 (panel A), OcSus2 (panel B) and OcSus3 (panel C) proteins.

Panel A, 1 stands for empty vector as the control; 2 shows the expressed OcSus1 protein; 3 represents the purified OcSus1 protein.

Panel B, 1 stands for empty vector as the control; 2 shows the expressed OcSus2 protein; 3 represents the purified OcSus2 protein.

Panel C, 1 shows the expressed OcSus3 inclusion body protein; 2 stands for empty vector as the control.

M indicates protein molecular standards and the arrow indicate the target proteins.

Fig. S2. SDS-PAGE analysis of crude extract of *E. coli* co-expressing soluble OcSus3 and chaperone protein.

M indicates protein molecular standards and the arrow indicate the target proteins. Lane 1, purified OcSus3 protein; Lane 2 and 5, induced by arabinose but without IPTG used as control; Lane 3, crude cell extract containing soluble OcSus3; Lane 4, OcSus3 inclusion body.

Fig. S3. Western-blot analysis of soluble OcSus1 (panel A), OcSus2 (panel B) and OcSus3 (panel C) proteins expressed in *E. coli*. 1 shows the expressed OcSus protein; 2 stands for empty vector as the control.

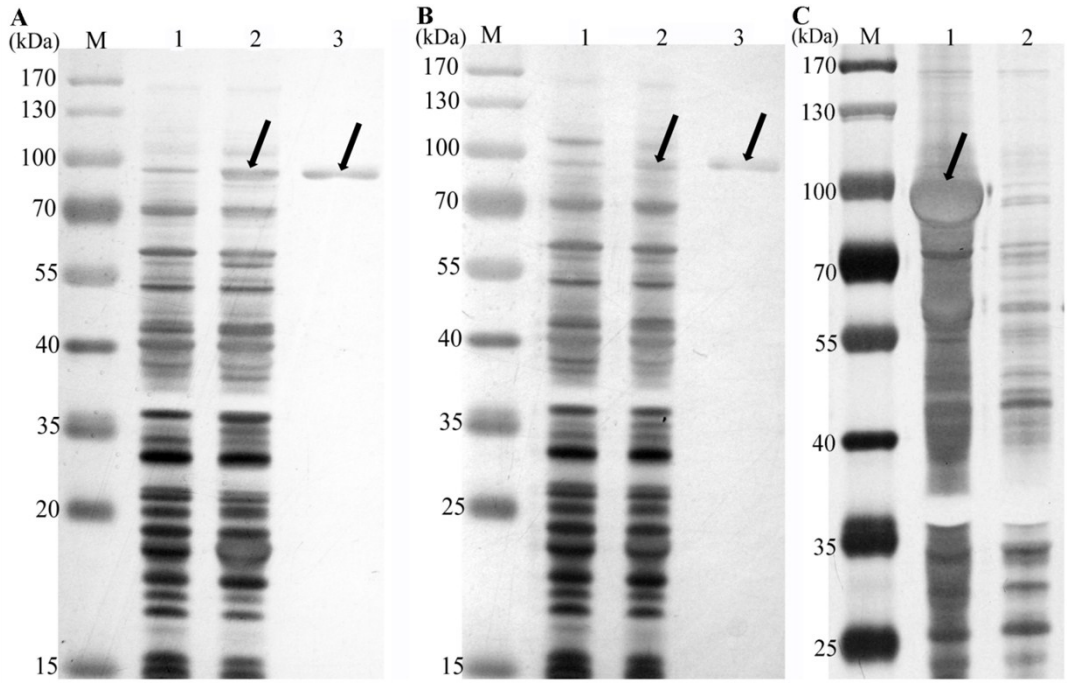
A
(kDa)
M
1
2
3
170
130
100
70
55
40
35
20
15
B
(kDa)
M
1
2
3
170
130
100
70
55
40
35
25
15
C
(kDa)
M
1
2
170
130
100
70
55
40
35
25

Fig. S1

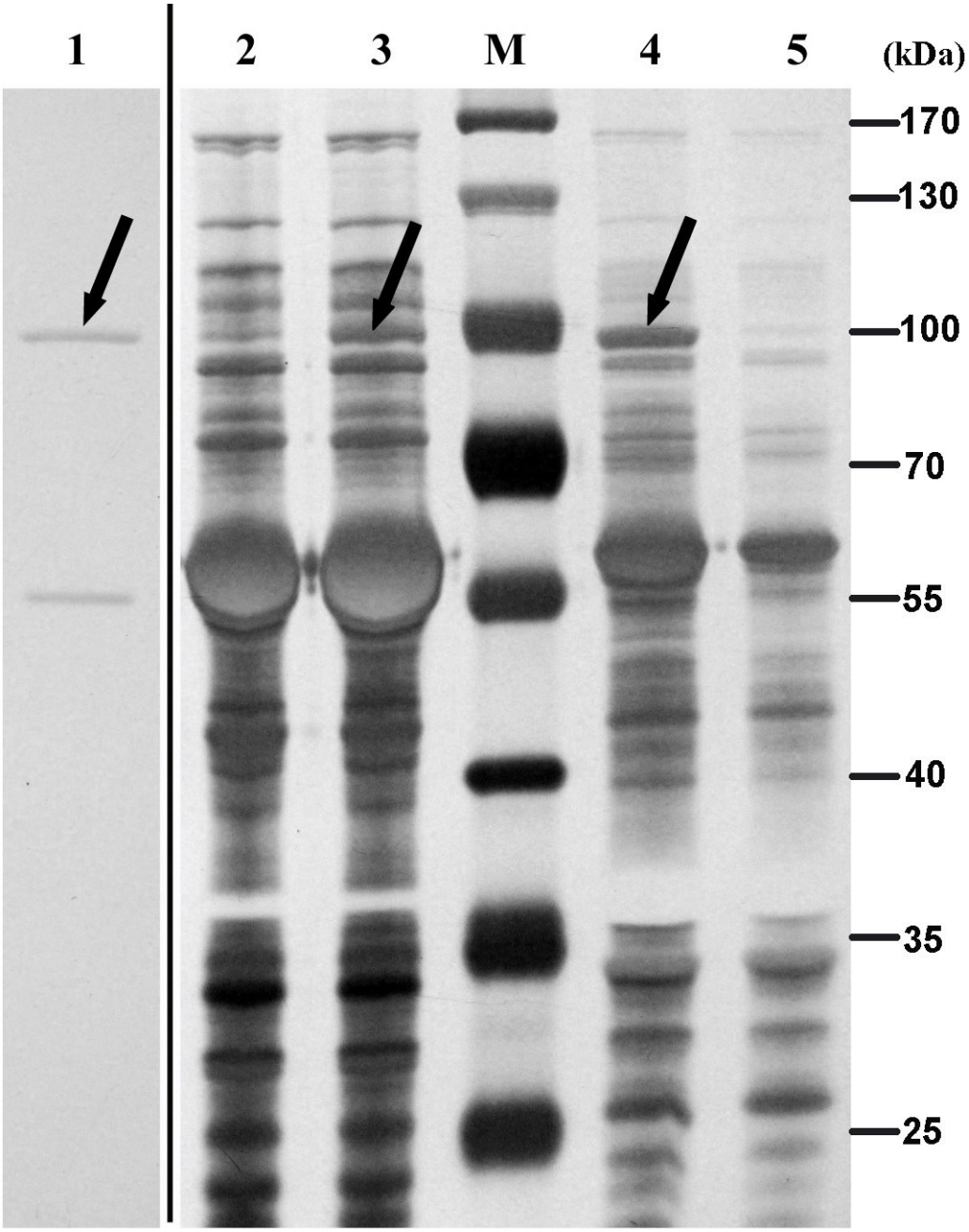

Fig. S2

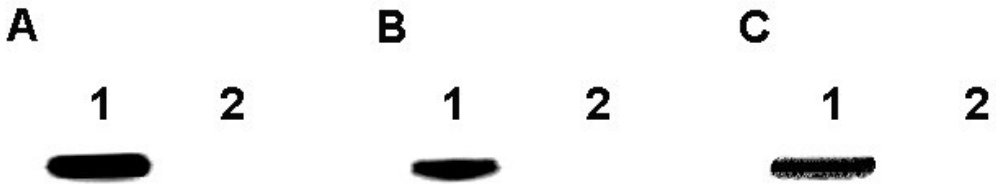

Fig. S3

Table captions

Table S1 Plasmids and strains used in this study

Table S2 Primers used in gene cloning, plasmid construction and quantitative RT-PCR analysis

Table S1

Plasmid/strain	Description	Source/Reference
Plasmid		
pEASY®-Blunt	General cloning vector, T7 promoter, f1 ori, Amp^r and Kan^r	TransGen, Beijing, China
pCDFDuet-1	A two-promoter expression plasmid carrying CDF replicon, Sm^r	Novagen, Madison, USA
pGro7	A molecular chaperone plasmid expressing GroES/EL, araB promoter, Cm^r	Takara, Dalian, China
pEASY-OcSus1	*pEASY*®-Blunt derived plasmid containing OcSus1 gene	This study
pEASY-OcSus2	*pEASY*®-Blunt derived plasmid containing OcSus2 gene	This study
pEASY-OcSus3	*pEASY*®-Blunt derived plasmid containing OcSus3 gene	This study
pCDFDuet-OcSus1	pCDFDuet-1 derived plasmid containing OcSus1 gene	This study
pCDFDuet-OcSus2	pCDFDuet-1 derived plasmid containing OcSus2 gene	This study
pCDFDuet-OcSus3	pCDFDuet-1 derived plasmid containing OcSus3 gene	This study
Strains		
*Trans*1-T1	F^-φ80(*lac*Z)△M15△*lac*X74 *hsd*R (r_k^-, m_k^+) △*rec*A1398 *end*A1 *ton*A	TransGen, Beijing, China
*Transe*tta(DE3)	F^-*omp*T *hsd*S_B ($r_B^-m_B^-$) *gal dcm* *lac*Y1 (DE3) pRARE (argU, argW, ilex, glyT, leuW, proL)Cam^r)	TransGen, Beijing, China
BL21(DE3)	F^- *omp*T *hsd*S($r_B^-m_B^-$) *gal dcm*(DE3)	TransGen, Beijing, China

Table S2

Primers	Sequence(5'- 3')	Length	G+C%	Description
FSus1	GAAAGCAAGAGGGAGGAGCC	20	60%	Forward primer used for OcSus1 isolation in the first round
FSus2	ATGGGCGATCGCTCTTTGAC	20	55%	Forward primer used for OcSus1 isolation in the second round
RSus3	CCGCCCATCTTCTCGCCCG	19	73.6%	Reverse primer used for OcSus1 isolation in in the first round
RSus4	TCACTTGGTTCCGTTTGCCG	20	55%	Reverse primer used for OcSus1 isolation in in the second round
FCDFDuetSus1	GCCAGGATCCGAATTCGATGG GTTCGCTGAACCTTAC	37	59.4%	Forward primer used for pCDFDuet-OcSus1 construction
RCDFDuetSus1	GCAAGCTTGTCGACCTCATTT AGTACCATTGGCGGC	37	62.1%	Reverse primer used for pCDFDuet-OcSus1 construction
FQRTSus1	GTCAGCGTCTCGAAAAGGTC	20	55%	Forward primer used for RT-qPCR analysis of OcSus1
RQRTSus1	TTGTGAGCCAACAGAGATGC	20	50%	Reverse primer used for RT-qPCR analysis of OcSus1
FSus5	CGGAAGGAAGGGAAGGAACC	20	60%	Forward primer used for OcSus2 isolation in the first round
FSus6	ATGGGTTCGCTGAACCTTAC	20	50%	Forward primer used for OcSus2 isolation in the second round
RSus7	GCCTTCCCTCGAAAGATAAAC	21	47.6%	Reverse primer used for OcSus2 isolation in the first round
RSus8	TCATTTAGTACCATTGGCGG	20	45%	Reverse primer used for OcSus2 isolation in the second round
FCDFDuetSus2	GCCAGGATCCGAATTCGATG GCGACAGCGAAGCTAG	37	50%	Forward primer used for pCDFDuet-OcSus2 construction
RCDFDuetSus2	GCAAGCTTGTCGACCTCAAT CAGATGAAAGGGGAAC	36	52.7%	Reverse primer used for pCDFDuet-OcSus2 construction
FQRTSus2	GATCCGAACACCCTTGAGAA	20	50%	Forward primer used for RT-qPCR analysis of OcSus2
RQRTSus2	CATTTTCCAGGGCACGTACT	20	50%	Reverse primer used for RT-qPCR analysis of OcSus2
FSus9	AAATCCTCCGAACTCTGACGAT	22	45.4%	Forward primer used for OcSus3 isolation in the first round
FSus10	ATGGCGACAGCGAAGCTAG	19	57.8%	Forward primer used for OcSus3 isolation in the second round
RSus11	CATGGACGTCATCGACGTTC	20	55%	Reverse primer used for OcSus3 isolation in the first round
RSus112	TCAATCAGATGAAAGGGGAAC	21	40.9%	Reverse primer used for OcSus3 isolation in in the second round
FCDFDuetSus3	ACCACAGCCAGGATCCGATGGG CGATCGCTCTTTGAC	36	58.3%	Forward primer used for pCDFDuet-OcSus3 construction
RCDFDuetSus3	CCTGCAGGCGCGCCGTTATCAC	36	50%	Reverse primer used for

	T TGGTTCCGTTTGCC			pCDFDuet-OcSus3 construction
FQRTSus3	CTGGGAGTACGTTCGGGTTA	20	55%	Forward primer used for RT-qPCR analysis of OcSus3
RQRTSus3	CGATAGATGCCGGTTAAGGA	20	50%	Reverse primer used for RT-qPCR analysis of OcSus3
FGAPDH2	ACTTGGTGTCCACCGACTTC	20	55%	Forward primer used for GAPDH1 RT-qPCR
RGAPDH2	ATTCGTTGTCGTACCAAGCC	20	50%	Reverse primer used for GAPDH1 RT-qPCR