

**Table S1.** Predicted Tat signal peptide and motifs in MelC1 and MelD1 proteins based on TatP (version 1.0)

Features	Tat signal peptide	Tat motif	Cleavage	Position
MelC1				
<i>S. antibioticus</i>	Y	RRRAL	ARA-DD	30-31
<i>S. avermitilis</i>	Y	RRHAL	ASA-AG	32-33
<i>S. glaucescens</i>	Y	RRRAL	ATA-AG	32-33
<i>S. scabies</i>	Y	RRHAL	AAA-DE	28-29
<i>S. galbus</i>	Y	(RRRAY)*	APA-AT	30-31
<i>S. castaneoglobisporus</i>	Y	RRRAL	ASA-AG	33-34
<i>S. tanashiensis</i>	Y	RRRAL	AVA-AP	31-32
<i>S. lincolnensis</i>	Y	RRRAL	AAA-HD	36-37
<i>S. griseus</i>	N	RRQAL	VPA-GT	35-36
MelD1				
<i>S. avermitilis</i>	N	N	N	N
<i>S. griseus</i>	Y	N	APA-AP	26-27
<i>S. coelicolor</i>	Y	N	AEA-AT	28-29
<i>S. scabies</i>	Y	RRNAL	VVA-AV	40-41
<i>S. griseus</i> GriE	Y	RREMV	EGA-AE	34-35

\* No Tat motif pattern (-RR-X-[FGAVML][LITMV]) was found, but this similar sequence is present.