



**Supplementary Figure 1. Scheme for the prediction of archaeal lipoproteins.** Three widely used lipoprotein prediction programs, LipoP and Prosite PS51257, predictors that were trained predominantly on Gram-negative bacterial Sec lipoproteins and PredLipo, which was trained on confirmed Gram-positive bacterial Sec lipoproteins. Lipobox positive predictions required recognition by at least two of these programs (Supplementary Table 4). TatFind was used to predict Tat substrates. Tat substrates predicted to contain a lipobox were deemed to be Tat lipoproteins, other Tat substrates were deemed to have SP with SPase I cleavage site. Predicted lipoproteins that are TatFind negative were deemed to be Sec substrates that are lipoproteins. Phobius positives that are TatFind negative and that are not predicted lipoproteins were deemed to be Sec substrates whose signal peptide is processed by SPase I.