

**Alternative sigma factor RpoX is a part of RpoE regulon and plays distinct roles  
in stress response, motility, biofilm formation and hemolytic activities in the  
marine pathogen *Vibrio alginolyticus***

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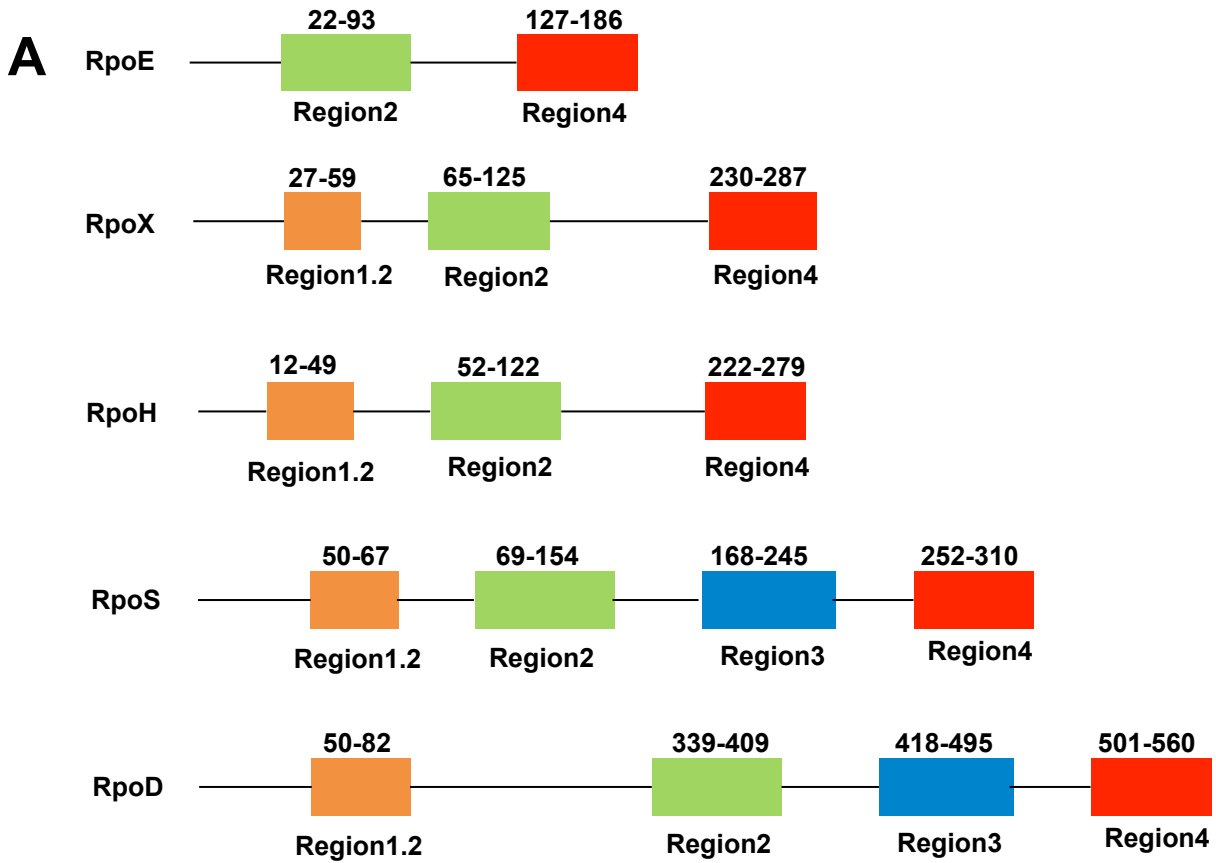
Tel. and Fax: +86-21-64253306.

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**Running title:** RpoX regulates stress adaptation and pathogenesis

## Legends for supplemental figure

**FIGURE S1.** Genetic analysis of *rpoX* in vibrios. **(A)** Comparison of the conserved domains between RpoD and the alternative sigma factors RpoE, RpoX, RpoH, and RpoS. The numbers indicate the related amino acid residues. **(B)** Alignment of the amino acid sequence of *V. alginolyticus* RpoX (VARpoX) with the protein sequences of RpoX from *V. parahaemolyticus* (VPRpoX), *V. harveyi* (VHRpoX), and *V. splendidus* (VSRpoX). The identical and highly conserved amino acids in the sequences are highlighted in black and gray, respectively.



**B**

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VARpoX : MNNECFARFRAVTDDEL*SKKESL20LVG-KD*YAHY40LKDI*VGIDLLSRE60DELHYAKLNRAGD*EAR*MLIE80SNLRLVVKIAAG* : 80
VPRpoX : MNNECFARFRAVTDDEL*SKKESL20LVG-KD*YAHY40LKDI*VGIDLLSRE60DELHYAKLNRAGD*EAR*MLIE80SNLRLVVKIAAG* : 80
VHRpoX : -----MKKESL20LVG-KD*YAHY40LKDI*VGIDLLSRE60DELHYAKLNRAGD*EAR*MLIE80SNLRLVVKIAAG* : 63
VSRpoX : MNND*SA*AF*Q*GF*T*DD*TI*KE*EP*TT*-A*E*YAHY40LKDI*VGIDLLSRE60DEV*Y*AKLNRAGD*K*AR*D*MLIE80SNLRLVVKIAAG* : 80
          64e  e g kdpYahYlKdIvgidLL3rE E6 Ya4Ln9aGD AR 6IESNLRLLVVK6Ak Y

VARpoX : L*KR*PG*NN*FT*LL*DL*IE*BG*NI*GLI*KA*VD*K*FD*PE*PGY*RF*ST*YA*V*W*IRE*IE*AAL*NN*GRT*VRL*PA*H*V*CKE*INS*LAL*K*LD*ASK* : 161
VPRpoX : L*KR*PG*NN*FT*LL*DL*IE*BG*NI*GLI*KA*VD*K*FD*PE*PGY*RF*ST*YA*V*W*IRE*IE*AAL*NN*GRT*VRL*PA*H*V*CKE*INS*LAL*K*LD*ASK* : 161
VHRpoX : L*KR*PG*NN*FT*LL*DL*IE*BG*NI*GLI*KA*ID*KY*DP*EGY*RF*ST*YA*V*W*IRE*IE*AAL*NN*GRT*VRL*PA*H*V*CKE*INS*LAB*RF*HD*ASK* : 144
VSRpoX : L*KR*PG*NN*FT*LL*DL*IE*BG*NI*GLI*KA*ID*KY*DP*EGY*RF*ST*YA*V*W*IRE*IE*AAL*NN*GRT*VRL*PA*H*V*CKE*INS*LASK*K*LD*V*SK* : 161
          lKR gn1ft6LD6IEBG6GLIKA6DK51PEpGYRFSTYAVWWIREIEaALaN gRTVRLPAH6cKE6N3la kk d 8K

VARpoX : S*ES*KE*IS*IS*EL*S*RC*SG*V*RA*FR*YD*EL*V*AL*-S*GF*ID*V*ST*T*AD*HR*V*CV*LE*EL*CE*SE*Y*T*DP*Q*DC*EN*Q*PF*Q*AI*EN*I*ET*LE*P* : 241
VPRpoX : S*ES*KE*IS*IS*EL*S*RC*SG*V*RA*FR*YD*EL*V*AL*-S*GF*ID*V*ST*T*AD*HR*V*CV*LE*EL*CE*SE*Y*T*DP*Q*DC*EN*Q*PF*Q*AI*EN*I*ET*LE*P* : 241
VHRpoX : S*ES*KE*IS*IS*EL*S*RC*SG*V*RA*FR*YD*EL*V*AL*-S*GF*ID*V*ST*T*AD*HR*V*CV*LE*EL*CE*SE*Y*T*DP*Q*DC*ED*H*CF*Q*AL*SH*V*W*TL*EV* : 224
VSRpoX : S*ES*KE*IS*IS*EL*S*RC*SG*V*RA*FR*YD*EL*V*AL*-S*GF*ID*V*ST*T*AD*HR*V*CV*LE*EL*CE*SE*Y*T*DP*Q*DC*ED*H*CF*Q*AL*EQ*INT*LE*P* : 241
          s4e SIEe6S sgvk 46d 66aL sgf6dv 3t P vIe cesey dPq dce ftqa6e 6 3Lp

VARpoX : K*LD*V*SK*Y*AKLNRAGD*K*AR*D*MLIE80SNLRLVVKIAAG*----- : 296
VPRpoX : K*LD*V*SK*Y*AKLNRAGD*K*AR*D*MLIE80SNLRLVVKIAAG*----- : 296
VHRpoX : K*LD*V*SK*Y*AKLNRAGD*K*AR*D*MLIE80SNLRLVVKIAAG*----- : 279
VSRpoX : K*LD*V*SK*Y*AKLNRAGD*K*AR*D*MLIE80SNLRLVVKIAAG*----- : 298
          4lq 66IhR5GLF VKTL e6G 6168nERVRQ6Q Ea6e46q K4l fDgw6

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Fig. S1