

10 20 30 40 50 60 70 80 90 100

*Vibrio\_cholerae* 1 MTL LL THRWLS LL LCLSLWAVPTLANI DL PET QRWS I FYRAALEQQS TP LVASQTLNQP FALL SSSH SQ YPDFTQY TWQDI ADLAATAKQC QPRNSS - - SPYL

*Vibrio\_vulnificus* 1 MTL LL THRWLS LL LCLSLWAVPTLASI DL PET QRWS I FYRAALEQQS TP LVASQTLNQP FALL SSSH SQ YPDFTQY TWQDI ADLAATAKQC QPRNSS - - SPHL

*Photobacterium\_profundum* 1 ----- WQQFYQQAGLLSPEQNLSQADINRYPKS LL LSSSQYPIFSQ FHWQEIQQLWQIDDQCQQNQPLVTKAAL

*Vibrio\_coralliilyticus* 1 ----- KLAACFLFLFPLAA-QAQLQEKWQSLYQQSWQ-A TALKITQQQLSQYPTE LLKQQARYPNFKQYNWQEIEQVYQVSQTCKKNAQY--SANL

*Chromobacterium\_vaccinii* 1 ----- QAETAVVALQQLDAA LLRPDSLYPALGQLPLAE LQALYRHGGQCRAPWPA---LP

Consensus

MTLL L THRWLS LL LCLSLWAVPTLA + I DL PET QRW+ I FY + + ALEQQS TP LVA + QTLNQP FALL SSSH SQ YPDFTQY TWQE I + + L + + TAKQCQ P + N + SVTS + + L

110 120 130 140 150 160 170 180 190 200

*Vibrio\_cholerae* 101 AKAVE FELALCRQTP LGAEWFQRVAWQHPAGGSYADRY IEHLPDSEQASFAS THPTRFTLASRYHPLHTLWQRPGAAGVDALLNGFR LY LAPNDE LWLSSEA

*Vibrio\_vulnificus* 101 AKAVE FELALCRQTP LGAEWFQRVAWQHPAGGSYADRY IEHLPDSEQASFAS THSTRFTLASRYHPLHTLWQRPGAAGVDALLNGFR LY LAPNDE LWLSSEA

*Photobacterium\_profundum* 70 QDAIE FELALCQKKS LANNWF DNKALLHPAGGSYADRY L TSLDKPHRELFL TQHRRLTLANQEHP LHAL LSELSPQGV DALLSGYRAY I TEQST LWLNDS

*Vibrio\_coralliilyticus* 89 NDAIE FELAMCNDQL LSDDWFQHTLLHPAGGSFADRY QDHQPNSQP - - SQTIRRYLT INNPQHPLHAA LSTLSNEGREALNGYRAWME - KDTLWLSGEQ

*Chromobacterium\_vaccinii* 53 ADLQRFERALCDGEALPSA WFAAHP - I HPLGGSYAWHY LQRHPDSASA LR - - - - PYLHVRRERPEAFAGIGKLGDDSLAALLSGER - WL LDGGDLWWRDGA

Consensus

ADA + E FELALCRQTP LGAEWFQR + A + + HPAGGSYADRY + EHL PDSEQA + FAS THR + + L TLA + RYHPLHAL + + RLGAAGVDALLNG + R + Y LAPND + LWLSSEA

210 220 230 240 250 260 270 280 290 300

*Vibrio\_cholerae* 203 GWHLSSVQWRALTAPLPFTLEPYQAHKPCDERYSNLCFNQRVSSHALLYSGLVIGVLLAFGAALRSLWLRYQEGRRRFLQLLTHELRTPITS LGFTVES

*Vibrio\_vulnificus* 203 GWHLSSVQWRALTAPLPFTLEPYQAHKPCDERYSNLCFNQRVSSHALLYSGLVIGVLLAFGAALRSLWLRYQEGRRRFLQLLTHELRTPITS LGFTVES

*Photobacterium\_profundum* 172 GWKAI DANQQPLAHS MKLAITDN - TAAVCSFRYSNLC LNVAIPKPQLTRWILVFLALAI AFLITRNIYQRRQNAKERQFILQLLTHELRTPITS LGFTVEM

*Vibrio\_coralliilyticus* 187 GWKAVTAETMQPVAKQLDITLS - - - GPNC TFRYSNLC I SDVAENVLALRLFVAGLS ILI LYMTVKTLYTRRQQSREKRFILQLLTHELRTPITS LGFTVEM

*Chromobacterium\_vaccinii* 147 SWRRYGA AQWRPLAEAAGLALSP LADGDACPQP LGRICARPLPSPWWMRALAGFSL LAAAGV LAYGWLQRRRLERERRFV LQMLTHELRTP IAGLGNVVED

Consensus

GW + + LSAVQWRPLAAPLP + TL + PYQA + KPCD + RYSNLCFNQRV + S + ALLRSGLV + + VLLA + GAALRSL + + RRQEGRRRFLQLLTHELRTPITS LGFTVE +

310 320 330 340 350 360 370 380 390 400

*Vibrio\_cholerae* 305 LRSQFDELSPKAQESLWRLMADHQRLAQLSETSRHYLSPSHD - TMAHHPAQ L SDFIEHCI EGF EVELH LKHDS I LALPY YWLG LCVTNL LSNAKQHGVPP I R

*Vibrio\_vulnificus* 305 LRSQFDELSPKAQESLWRLMADHQRLAQLSETSRHYLSPSND - TMAHHPAQ L SDFIEHCI EGF EVELT LKHDP I VTLPY YWLG LCVTNL LSNAKQHGA PPIH

*Photobacterium\_profundum* 273 FREQFDELSDN TQQTVWRLMADHQRLAQLAETS KGYLSSQP EEQFQHQ SAY L S DWLDHY L EKYS LDY I L NEDPELNLPYYWLG I CLENL I KNAKQHGKGNVA

*Vibrio\_coralliilyticus* 285 FRSQFDRLPNDTQDAVWRLMSDHQRLSQLTENSKIYLS TQRSQQLLKQMAS LDEWLEHTCEKHGLSYQLNQDRELTLPFYWLS I CLENL I KNAKQHG HGKIE

*Chromobacterium\_vaccinii* 249 FRSGFDQLPPGAQQGFGRLADGVLKLRQLADASRHYL AADGR - LEAPQPLP LSEWLDNVA ERHGATYCLDQDRNLNL P VYWLG LCLDNL LRNARQHGQPPVR

Consensus

FRSQFDELSPKAQ + S + WRLMADHQRLAQL + ETSRHYLSP + + D + + MAHQPAQLSDWLEHCI E + + + + EY + L + + D + + L + LPYYWLG LCL + NLL + NAKQHG + PP I R

410 420 430 440 450 460 470 480

*Vibrio\_cholerae* 406 LTVSVVAQT LRIEVEDCGEFP SFYQRLCKRLSRHQDTHSRPNTDNMGVGLQLVRKLI TQMGGKLV IRRHPTRCILELPL

*Vibrio\_vulnificus* 406 LTVSVLSQTLRIE VKDYGEFP SFYQRLFKSLSMPRSSH SRPSKDNMGVGLQLVRRLI TQMGGKLV IRRHPTRCILELPL

*Photobacterium\_profundum* 375 IDIH - VDQVLR I QVSDQGEFPS IAQRWLTLS - - - - - PSMSKTNMG IGLV I VSR LMKQMGGK L I CQRK PTRC I LELPL

*Vibrio\_coralliilyticus* 387 IRAT - LTNKLV I EVTDQGD FPSAMAQFFTKFQ - - - - - GKTNHENMG IGLS I VEHLMKLMGGK LV IRRRPTRC I LELPL

*Chromobacterium\_vaccinii* 350 IQAGWERGR LRLAVSDGGALPRYRLSLLRRE - - - - - LSASAGMGLGLA I VRRVMKRLGGR LALEGPTTFTLELPL -

Consensus

I T + SV + + QTLR I EVSDQGEFPS FYQRL + + RLS + + + + HSRP + KDNMG + GLQ I VRRLMKQMGGK LV IRRHPTRC I LELPL